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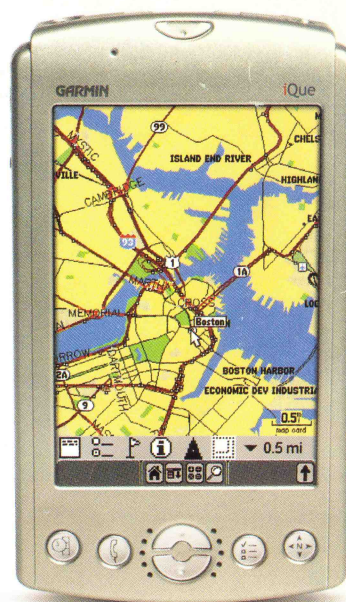
35+
Hot Product
Reviews



Palm Tungsten W



HP iPAQ h5450



Garmin iQue

Issue 6.1 • Apr / May 2003



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CAP	a	s	d	f	g	h	j	k	l	;	'		
Shift	z	x	c	v	b	n	m	,	.	/	<		
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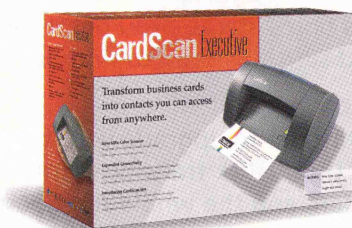
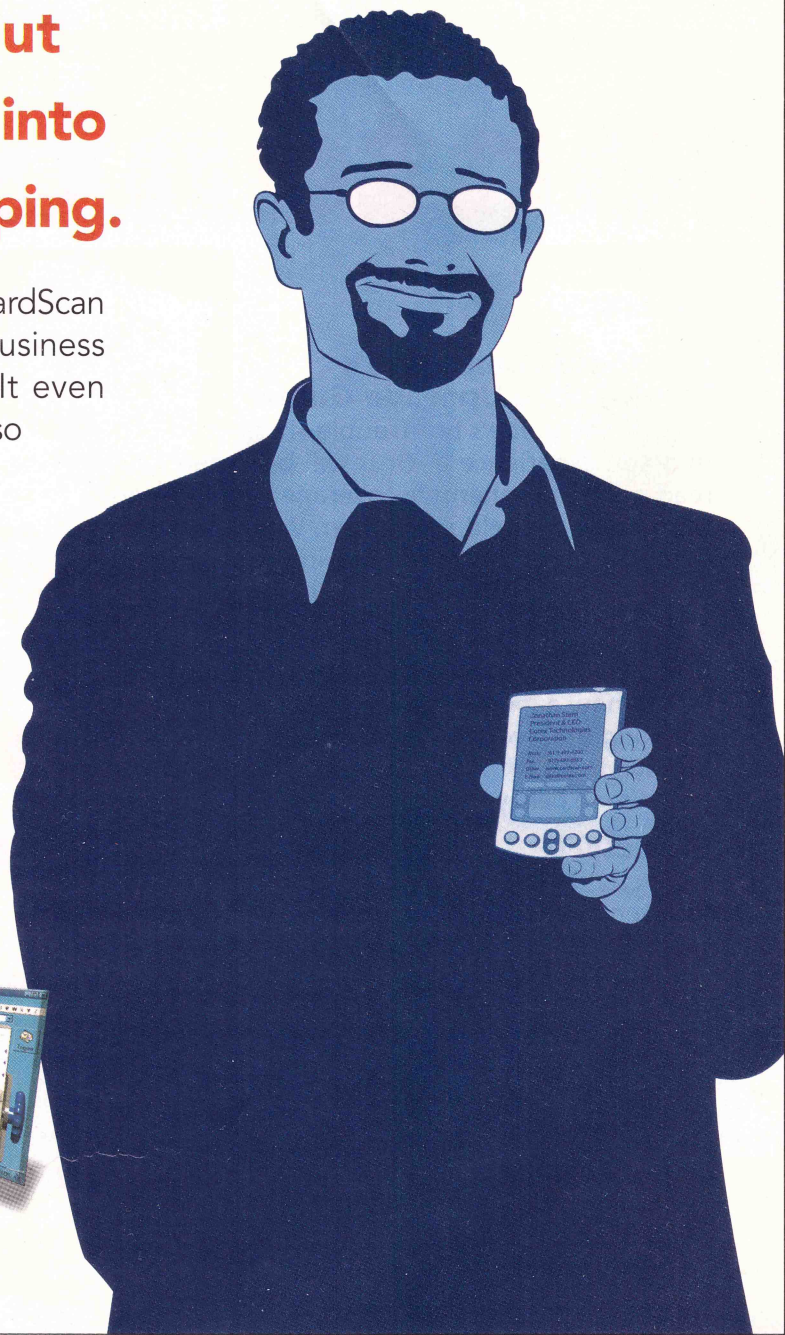
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CardScan

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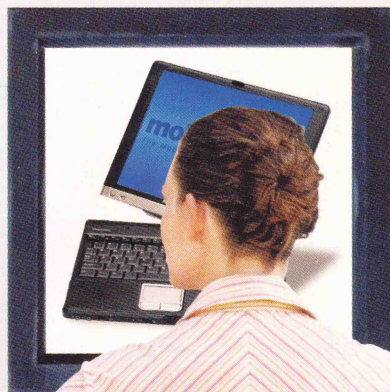
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Geek Nirvana 2003

Inside the razzle-dazzle of this year's Consumer Electronics Show

How good was the 2003 Consumer Electronics Show? So good that despite being sick as a dog, I had to be dragged kicking and screaming onto the flight home. And not just because of the limo rides, press parties, flirtatious PR babes, and my-suitcase-isn't-large-enough-to-hold-them-all t-shirts and other freebies. It was the *stuff* that made CES a standout.

Stuff like Garmin's **iQue 3600**, a new Palm OS 5 handheld with built-in GPS, an exquisite half-VGA screen, and a whopping 32MB of memory (take that, Sony). Unless it turns out that the iQue, say, gives you rabies, it's going to be among the hottest handhelds of 2003. You can get the full scoop in this issue's "New" section. (And be sure to check out our special GPS minimag in this issue, where you'll learn everything you need to know about the technology and read hands-on reviews of some top handheld/GPS products.)

Not to be outdone, Sony took the wraps off yet another Clié: the **NZ90**. This represents a curious move, because although the specs are impressive—a 2-megapixel digital camera, built-in Bluetooth, and so on—the \$800 price tag flies in the face of market trends. This puppy (reviewed in this issue) immediately sparked some heated debate among our editors; now let's hear from you. Would you pay \$800 for a handheld PC, even if it had every feature under the sun? Send your thoughts to letters@hhcmag.com.

Pocket PC devotees who haven't had the chance to fondle HP's **iPAQ 1910**, run—run, I tell you!—to your nearest gadget warehouse and have a look. Though it wasn't introduced at CES, that's where I first held one—and it blew me away. It's incredibly thin, compact, light, and

just plain cute. Plus, it's hard to beat the \$299 price. If I were switching platforms or upgrading from an older Pocket PC, I can't think of another model I'd rather have.

Coming soon to a Target near you: the **Simplici Home Organizer Plus**, one of CES's hidden jewels. It's like an oversize PDA that hangs on your fridge or a wall, storing addresses, schedules, voice notes, recipes, shopping lists, and other handy information. But it supports five different users, so everyone in the family can maintain their own records. An optional clip-on thermal printer churns out shopping lists, addresses, or whatever. This isn't especially fancy technology—it's just a smart idea that's going to hit it big. Price: around \$80.

Finally, CES revealed some slick, innovative MP3 products and services. Elsewhere in this issue you'll find my review of the Ideao **WF-200 Wireless MP3 Player**, my new favorite exercise accessory. It's an MP3 player built right into a pair of headphones (neckphones, actually), so you don't have a cord or separate player flopping around. I also liked the idea behind Rade Media's **music encoding service**, which works like this: you ship them all your CDs, they rip all the songs, load them on a Creative Nomad Jukebox 3 or Jukebox Zen, then ship everything back. Presto: instant MP3 collection and player. Neat solution if you're busy, lazy, or not technically inclined.

The best thing about this year's hustling, bustling CES? It proved beyond a doubt that the economy must be improving.

Rick Broida
Editor
rick@hhcmag.com

Publisher Andrew Eisenberg / andrew@hhmgroup.com
Editor-in-Chief Denny Atkin / denny@hhcmag.com
Editor Rick Broida / rick@hhmgroup.com
Digital Photography Editor Dave Johnson
Contributing Writers David Haskin
Copy Editor Dawn Jepsen
Art and Production Director Connie Bigelow
Digital Artist Ellen Fullman
Illustrator Christopher Ford / cdf212@nyu.edu
News/Product Announcements editor@hhcmag.com
Letters to the Editor letters@hhmgroup.com

EDITORIAL OFFICE

Handheld Computing
41 Bacon Drive
Shelburne, VT 05482

CORPORATE & ADMINISTRATIVE OFFICES

Handheld Media Group, Inc.
1670 South Amphetlett Blvd. • Suite 214
San Mateo, CA 94402
p 650.378.8522 / f 650.378.8513

Chief Executive Officer

Andrew Eisenberg
andrew@hhmgroup.com

Director of Sales and Marketing

Sandy Sparkman / sandy@hhmgroup.com

Marketing Coordinator

Anne Snedigar / anne@hhmgroup.com

Advertising Account Managers

Stephen Davis / stephen@hhmgroup.com
Christy Eisenberg / christy@hhmgroup.com
Jim Fox / jim@hhmgroup.com
p 650.378.8522 / f 650.378.8513

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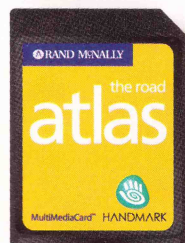
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Bundle of Joy

I just read issue *Handheld Computing eNews* issue 153. I know this was only a quick review, but one important point of difference between handhelds is the included software. For example you mentioned there was a \$40 price difference between the Zire and m125, but a buyer also needs to consider that the m125 comes with about \$50 worth of software that the m105 and Zire don't include.

I've recommended for years that when users look at PC's they consider the bundled software as well, since they'll wind up spending that money later anyway, best to make the deal when the prices are cheaper.

Of course, even if the Zire had \$500 worth of software, I would never recommend it to anyone. Unless you bought it for the software and then gave away the unit.

—Craig Boudreaux

You can read Handheld Computing eNews issue #153 with Denny Atkin's "Guide to Buying a New Handheld" at www.hhcenterprise.com/HHC_Weekly/wk0153h.pdf. To sign up for our free weekly electronic newsletters, visit www.hhcmag.com.

I Beg to Differ

I just opened and read *Handheld Computing eNews* issue 153, indicating a warning to stay clear of the Palm i705, which is about to become very expensive due to increasing Palm.net

rates, and is also soon to be replaced by the Tungsten W. I am extremely disappointed in both comments.

I have had my i705 for about a year and have been very pleased with its performance. Signal strength is good in most major metropolitan areas and I have had few problems. Software upgrades and additions have worked flawlessly which is a credit to Palm and its developers. As for cost, I feel the unlimited monthly plan is a reasonable deal, as long as it stays in the range of a monthly cell phone plan \$30-\$35/month.

E-mail competition is coming from new cell phones but access to software on my Palm is a plus. I would not appreciate anything that reduces my current flexibility and costs, and have not received any notice from Palm or their site indicating this may occur. While I may be willing to upgrade to a wireless Tungsten with vivid color and full use of my applications, I do not see value in doing so for \$500 or more.

—Marty Wood

You must not have received notice that Palm has discontinued the unlimited monthly plan for Palm.net access. While we agree that, with the unlimited plan, the i705 was a fine device, Palm.net is not allowing users to renew that plan. When your current contract is up, you'll find that the \$34.99 and \$39.99 plans offer a mere 1MB of data per month, with additional data costing 8 to 10 cents per kilobyte. (There's also a

\$19.99/month plan, with a laughable 100K of data/month.) Compared to current data rates now offered by cellular providers, the new Palm.net rates are highway robbery and only viable for the lightest of users.

Palm has hinted that it will offer an upgrade path to the Tungsten W, which uses cheaper and faster cellular data service, for current Palm.net users. At press time the company hadn't released details on what discount might be offered.

Get Amped

I teach English as a second language to adults. I use a portable cd player in my classes to play music for my students. I'd really like to get an mp3 player that I could use in class that would be clear enough for everybody to hear. That way I don't have to carry so many cds with me.

I was thinking of getting the Kyocera 7135 smart phone, and I wanted to know if there is anything I could attach it to, like an amplifier and external speakers. I want a solution that is as light as possible, but that has decent sound.

Is this possible? Is there a limitation of the power/wattage inherent in a small device? Is there a portable amplifier or something that I could use?

The idea is carry as little as possible in my already overstuffed backpack, which now has my Dana in it too.

—Southbound747

Bundle of Joy

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—Craig Boudreaux

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New!

Palm Powered News

New Version of Quickoffice to Support Native Word, Excel Documents

Cutting Edge Software's (www.cesinc.com) latest update of its Quickoffice Premiere suite boasts a very useful feature for road warriors: The program will now be able to read Word, Excel, and Powerpoint files natively, rather than requiring a HotSync conversion. This means that, paired with Snappermail or

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14	3/27/2000	1	1	nf0f
15	3/30/2000	1	0	nf0f

QuickOffice can now open Excel, Word, and Powerpoint documents without prior conversion.

other supporting programs, someone can e-mail you an Office document and you can open it directly on your handheld. The initial release

won't allow you to save in native Office formats, but CES offers an e-mail address that will automatically convert Quickoffice documents back to Office format so you can e-mail them to desktop PC users.

Palm, Sony Drop Prices on Handhelds

It's a fire sale at Palm (surprising, given that the wireless Tungsten W is the only new model expected this spring). In February, the company slashed prices on three of its most popular models. The Tungsten T now sells for \$399; the m515, for

Continued on Page 12

Garmin Shows its iQue

New Palm OS PDA First to Have Built-in GPS

Move over, Sony. The hottest handheld unveiled at the 2003 Consumer Electronics Show wasn't the Clié NZ90, but Garmin's from-outta-nowhere iQue 3600.

Built around Palm OS 5 and sporting a roster of high-end features, the iQue also happens to be the first handheld PC with a built-in GPS receiver. Translation: real-time mapping, turn-by-turn navigation, and other valuable GPS features.

Powered by Motorola's new 150MHz DragonBall MXL microprocessor, the iQue boasts 32MB of internal memory—a first for Palm OS handhelds. It also sports a Secure Digital memory expansion slot and a 320x480-pixel transfective color display. Like Sony's Clié NR, NX, and NZ models, the screen employs a "soft" Graffiti area that can collapse when not needed. The iQue will also provide MP3 playback.

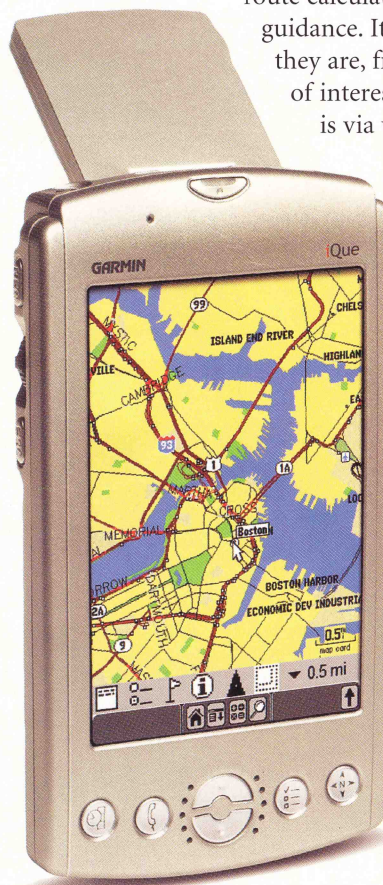
The iQue features a flip-up GPS antenna that locks in place at two different angles to optimize GPS signal reception and viewing, and folds away flush in the back of the unit. When the antenna is in the upright position, it will automatically turn on the GPS navigation function and begin acquiring satellite signals. Likewise, when the antenna is closed, the GPS function will automatically shut off to preserve battery life. The iQue provides the user with typical accuracy of 20 to 30 feet—or less than 10 feet when receiving corrected GPS data from the Wide

Area Augmentation System (WAAS) in the North American coverage area.

Garmin's Que technology affords location awareness, electronic mapping, automatic route calculation, and turn-by-turn voice guidance. It enables users to see where they are, find a street address or point of interest, know where the next turn is via visual and voice guidance, get back on track when

they've strayed off course, and, ultimately, navigate efficiently to their desired destination. iQue also connects the Palm Address Book and Date Book to the GPS electronic map, which gives users the ability to navigate directly to a specific address within the contact list. Additional integrated features are expected to be available through third-party software developers.

The iQue will be priced at \$589 and is expected to be available in Q2. Watch for a hands-on review in our next issue.



The iQue 3600's GPS antenna folds away flush when not in use. Sweet.

Garmin iQue 3600

OS: Palm OS 5

Processor: 150MHz DragonBall ARM 9

Memory: 32MB

Expansion: Secure Digital slot

Screen: 320x480-pixel color

Size: 5x2.8x0.8 inches (HWD)

Weight: 5.2 ounces

Price: \$589

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Innovative Leather Cases

Palm News *continued*

\$299; and the m130, for \$199. The latter is Palm's least-expensive color handheld to date.

Meanwhile, Sony reduced the Clié SL10 to \$129.99, the SJ20 to \$149.99, and the SJ30 to \$219.99. The latter two are obviously being closed out to make way for the just-announced SJ22 (due in March) and the SJ33 (see preview on this page). As for the SL10, Sony won't comment as to its fate—but for now it's a pretty sweet deal.

MP3 for Your Tungsten T

Speaking of the Tungsten, thanks to a new patch from Palm, your T can now play MP3 tunes in the style to which you've become accustomed. PalmAudioUpdate.prc (available from www.palm.com/support/downloads/palmaudio.html) fixes the bug that made MP3 and WAV files sound like AM radio. Now you can enjoy the benefits of third-party audio players like Aerodrome Software's AeroPlayer (www.aerodromesoftware.com) and NormSoft's Pocket Tunes (www.pocket-tunes.com).

AvantGo Will Go On

Now that database heavyweight Sybase has acquired AvantGo, what will become of the free Web-clip service that users have enjoyed for so many years? According to Marsha Marsh, representative for iAnywhere Solutions (the Sybase subsidiary that will operate AvantGo once the acquisition is complete), the

Continued on Page 14

new!

Sneak Peek: Sony Clié PEG-SJ33

It's Tuesday...Sony must have another Clié. Sure enough, hot on the heels of the just-introduced NZ90 (see review in this issue) comes the more reasonably priced Clié SJ33. This successor to the SJ30 (see review in Issue 5.6) arrived just as we were booting this issue out the door; we stopped the presses long enough to bring you a hands-on preview.

Among the highlights: a 66MHz Dragonball processor (twice the speed of the SJ30's), 16MB of RAM, a 320x320-pixel color screen, enhanced audio, an MP3 player, and earbud headphones. The SJ33's non-removable, hard-plastic screen cover flips up like Captain Kirk's communicator—cool, but we're concerned it might break if accidentally knocked the wrong way. Speaking of Star Trek, when the cover is closed, the mostly black SJ33 resembles the photon tube they buried Spock in. It's a bit more rounded than the SJ30, and just a hair longer and thicker. It also brings yet another hard-button design to the table: four small, recessed application buttons and two stylish but barely perceptible scroll buttons. Once again, Sony has engineered a Clié that's terrible for games that rely on buttons.

Nevertheless, with its \$299 price tag, fast processor, terrific screen, and generally pleasing design, the Clié SJ33 should appeal to anyone seeking a mid-range Palm OS handheld. Sure, we wish it had OS 5, but next Tuesday's just around the corner, right?



Sony Clié PEG-SJ33

OS: Palm OS 4

Processor: 66MHz DragonBall

Memory: 16MB

Expansion: Memory Stick slot

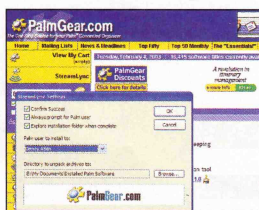
Screen: 320x320-pixel color

Size: 4.2x2.9x0.75 inches (HWD)

Weight: 6 ounces

Price: \$299

PalmGear's StreamLync Makes for One-Click Installs



One-click program installation: Why didn't PalmSource think of this? We're glad PalmGear did!

Installing files to a Palm OS handheld can be confusing for new users, and it remains tedious even after you get the hang of the process. Extract the Zip file, try to remember where you extracted the Zip file, find the "Read Me" file, determine which files you need to install, and then select them for HotSync. PalmGear.com's new StreamLync technology can remove up to 13 steps from the installation process.

If the developer has made the file you're downloading available in StreamLync format, you simply click the StreamLync button on the Web page to start the download. The free StreamLync Windows application will automatically extract the zip file and copy all of the relevant Palm OS files to your installation directory—all you have to do is press the HotSync button on your cradle. StreamLync can optionally open an Explorer window on the directory where the files were extracted, allowing you to read the documentation files for the program you just downloaded.

A late beta version of StreamLync performed flawlessly in our testing. The only real limitation is that the current version doesn't allow for "optional" files for certain hardware configurations, but developers can easily work around that by offering different StreamLync archives for various PDAs. Overall, this is a superb offering for newbies and experts like. Check it out yourself at www.palmgear.com.

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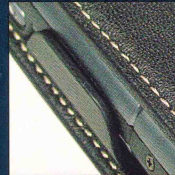


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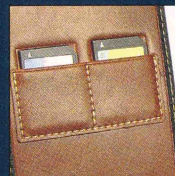
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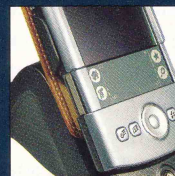
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- **Connected**
HotSync with cradle



- **Ergonomic**
Easy access to PDA controllers

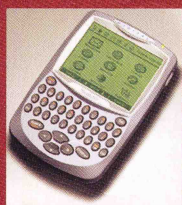
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Palm News *continued*

free AvantGo service will continue "just as it is currently available." Meanwhile, development of the Palm OS 5 beta version of AvantGo continues apace, according to AvantGo VP Karen Logsdon. "We're updating the beta regularly with new features," she told us.

The Latest Licensee

You've never heard of HuneTec (www.hunetec.com) and neither have we, but the Korean wireless-device manufacturer is



the latest company to join the exclusive Palm OS licensee club. HuneTec plans to create

a new class of enterprise-oriented two-way messaging devices, with WebLink Wireless to provide the service. We saw prototypes at CES, and at least one appears to be a direct (albeit grayscale) Tungsten W competitor. Stay tuned.

Palm.Net: No More All-You-Can-Eat Service

Palm.Net has discontinued its unlimited-usage plan for wireless Palm OS handhelds (including the Palm VII, i705, and forthcoming Tungsten W). Existing annual plans for unlimited coverage remain unchanged for the length of the contract, but no renewals will be accepted. Current unlimited-usage subscribers will be migrated to a new plan with variable metered pricing between now and the end of the year. Visit Palm.Net for more details.

new!

Graffiti: The Sequel



Must be the seven-year itch: PalmSource has moved on to a new Graffiti.

CIC's Jot, a handwriting-recognition engine, has been available for years as an alternative to Palm's Graffiti. So it came as something of a surprise that PalmSource just now adopted it to replace Graffiti in current and future handheld PCs. According to PalmSource, "Graffiti 2 powered by Jot...supports an intuitive, more natural form of input, minimizing learning time for new users and easing the transition for experienced users."

"Graffiti 2 is a superior handwriting recognition system that will enhance the ease of use that the Palm OS is known for," said David Nagel, president and CEO of PalmSource. "We expect this technology to appeal to a wide range of users who will be able to easily take notes and write memos on their Palm Powered devices."

Unlike Graffiti, which forces you to memorize and use a specific character set, Jot recognizes a more natural set of characters. For instance, the letter "a" can be drawn five different ways, including a cursive style. The software also provides onscreen "digital ink," thus allowing you to see your characters as you make them.

PalmSource plans to include Graffiti 2 not only with new handhelds, but also as part of "maintenance releases" for OS 4- and OS 5-based models. Thus, you may be able to upgrade to Graffiti 2. However, that move will likely irreparably replace "Graffiti 1," so you may want to take caution before installing such an upgrade. We'll provide more details as we get them.

Sony's New Stick Figures

What's neat about the latest Sony Clié handhelds is the way they can show movies, play MP3 files, and even capture photos and video clips. What's not so neat is the 128MB cap on Memory Sticks, the proprietary removable media needed to store all that stuff. Power users want a lot more space for their music and movies, but while CompactFlash and Secure Digital media have soared to 256MB, 512MB, and even 1GB capacities, Memory Stick (MS) has stayed put at 128MB.

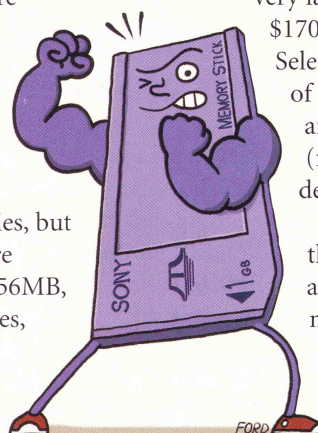
At the 2003 Consumer Electronics Shows, Sony finally unveiled higher-capacity cards—sort of. Memory Stick Select, which was scheduled to debut in February, offers 256MB—but not in a single, contiguous chunk. Rather, the card includes two 128MB memory banks, each accessible by removing the card and sliding a switch between A and

B positions. That's okay for storing music, but no good for movies, which tend to be very large files. Expect to pay about \$170 for a 256MB Memory Stick Select (versus about \$100 for a pair of 128MB cards). Sony also announced that a 512MB version (four banks of 128MB) is in development.

Sony and SanDisk then took the wraps off Memory Stick Pro, a high-speed, high-capacity new media that will be available this spring in 256MB, 512MB, and 1GB flavors (priced at \$190, \$440, and \$880, respectively).

The catch? Only the latest Sony products support MS Pro—that is, the media aren't backward-

compatible. While Clié NX- and NZ-series handhelds will support the cards via a software update to be released in April, all previous models (and most cameras, MP3 players, etc.) are stuck with MS Select.



A 1GB Memory Stick—yay! An \$880 price tag—boo!



How do you like to read?

palm reader pro

The Palm Reader family has now expanded to include Palm Reader Pro for Desktops. Now you have the ability to customize your reading environment beyond just selecting font and background color. Start creating your own themes and swapping them with other Palm Reader Pro users. You can also highlight sections of the text in any color and have notes attached to those highlighted selections. Other new features include the ability to control the line spacing of your books, improved note editing, and enhanced Find options. Plus, there's a new two-page viewing option that you're sure to enjoy. All for only \$9.95.

Palm Reader Pro for Desktops System Requirements:

Macintosh: OS 8.6 or later, using CarbonLib 1.6 or later/Mac® OS X 10.1 or later (Mac OS X 10.1.5 or later recommended)
Windows/Tablet PC: Windows 98/ME/NT 4.0/2000/XP



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Pocket PC News

Overclock Your iPAQ

Calling all HP iPAQ 1910 owners. Would you pay 10 bucks to make your handheld run 50 percent faster? That's the deal being offered by Revolutionary Software Front (www.revolution.cx), developers of **Clear Speed**, a utility the promises to accelerate the 1910's clock speed from 200MHz to 300MHz. We've yet to put it to the test ourselves, but it appears to be the real deal.

Free Cases! Yes, Free. Really!

Shopping for a case for your handheld PC? The best place to start is FreeCases.com, which is run by Incipio, the company that brought you FreeScreenProtectors.com. The site features a surprisingly diverse selection of cases for a variety of Pocket PC models (including Dell's Axim), all of them free when you enter the coupon code FREECASE during checkout. The only charge is for shipping, which starts at \$6.95.

The Best MP3 Player Money Can't Buy

If you love listening to MP3s but aren't wild about Windows Media Player, check out **PocketMusic** (www.pocketmind.com/pocketmusic.htm)—a freeware player that supports all known bit-rates and doesn't force you to store your tunes in the My Documents folder. PocketMusic includes a 10-band equalizer, lets you edit playlists and ID3 tags, and supports the use of Winamp skins (though you need the \$19.95 Feature Pack for that).

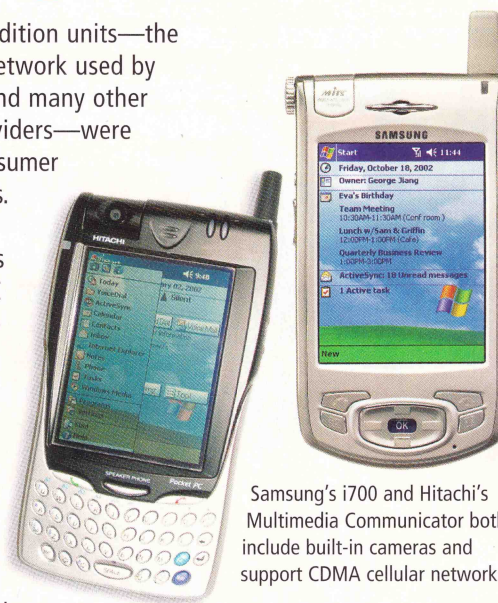
new!

Photogenic Pocket PC: Smartphones from Samsung and Hitachi

Two new Pocket PC Phone Edition units—the first to support the CDMA network used by Verizon, Sprint PCS, AllTel, and many other North American cellular providers—were announced at the recent Consumer Electronics Show in Las Vegas.

Hitachi's Sprint-exclusive Multimedia Communicator is the first consumer Pocket PC to sport both a built-in thumb-size keyboard and digital camera. The device sports a 400MHz XScale processor, a removable battery, and support for Sprint's high-speed data network.

Samsung's similar but more compact i700 forgoes the keyboard, but does include a digital camera and a speakerphone feature. The camera supports VGA (640x480) resolution. No further details were available at press time; cell phone companies are amazingly tight-lipped about even announced



Samsung's i700 and Hitachi's Multimedia Communicator both include built-in cameras and support CDMA cellular networks.

products until they hit store shelves.

One question we have on these otherwise impressive models: These are supposed to be Pocket PCs, right? And cell phone replacements? Then why is HP the only Pocket PC manufacturer to include any

kind of built-in or attachable screen cover? Our free tip to manufacturers: Spend the extra 50 cents and include a Treo-style plastic flip cover to protect these phones' screens in our pockets and we'd be a lot more likely to buy them.

Handheld Reviews Index

A look back at some recent reviews and ratings. Items receiving an A- grade or higher received Handheld Computing's Top Pick award.

Product	Issue	Review Summary	Rating
Dell Axim X5	6.0	A Pocket PC with a no-holds-barred feature set and rock-bottom price	A-
Kyocera 7135	5.6	Finally, a Palm OS smartphone that's actually smart. Great phone, great features, almost perfect.	A
Palm Tungsten T	6.0	Clever design, built-in Bluetooth, and OS 5 combine to make this Palm's best PDA ever.	A
Palm Zire	5.6	The double-digit price tag rocks, but Palm needs to put back some important missing features.	B-
Sony Clie NX70V	6.0	Though pricey and bulky, this feature-packed PDA still wins our hearts.	B
Sony Clie SJ30	5.6	A great high-res color screen coupled with an affordable price tag make this a compelling mid-range PDA.	B
T-Mobile Sidekick	5.6	With its killer price and space-age design, this is the smartphone to get—provided you don't need the Palm or Pocket PC OS.	A-
ViewSonic V35	6.0	This Pocket PC's \$300 price tag is nice, but you sacrifice a lot for it—including almost half the internal memory.	C+

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Attack of the iPod Clones

Now that Apple's iPod has become the standard by which all other hard-drive MP3 players must be judged, the clones are coming out of the woodwork. The best we've seen so far, Digital Innovations' Neuros, is reviewed in this issue. But several other players are just around the corner, each hoping to steal a slice of Apple pie.

Bantam Interactive (www.bantamusa.com), for instance, thinks smaller is better: smaller hard drive, smaller price tag. The **BA1000** comes in 2GB and 5GB versions (\$229.99 and \$329.99, respectively) and features line-in MP3 recording, an FM tuner, a voice recorder, and a large LCD with an interface that can be displayed vertically or horizontally.

iRiver (www.iriveramerica.com) has high hopes for its **iHP 100**, which sports a 20GB hard drive, USB 2.0 interface, and Sennheiser headphones. We got a sneak peak at CES and liked what we saw—particularly the spacious LCD screen and smart, icon-driven menu system.



An iPod by any name would sound as sweet...or something.



Finally, Samsung's **YP-900** (www.samsungusa.com) tackles the Neuros head-on, with line-in recording, voice recording, and a built-in FM transmitter for wireless playback of your tunes on any FM radio. However, this 10GB player/recorder will sell for \$429.99, while the 20GB Neuros is priced at \$399.

Gear for Spies and Stalkers

Despite joining a number of other media colleagues in having been royally dissed by the startlingly rude Panasonic PR weasels at CES, we're still geeked about the company's **SV-AV30** (www.panasonic.com)—a Lilliputian digicam that also shoots MPEG-4 video, plays MP3 tunes, and records voice notes. Designed like a teeny little portable DVD player, the SV-AV30 has a flip-up color LCD, a Secure Digital slot (with a 64MB SD card included), a built-in speaker, and a docking station that links the unit to a TV or VCR. That's not only for viewing the stills and movies you've shot, but also for recording shows for later viewing on the SV-AV30.

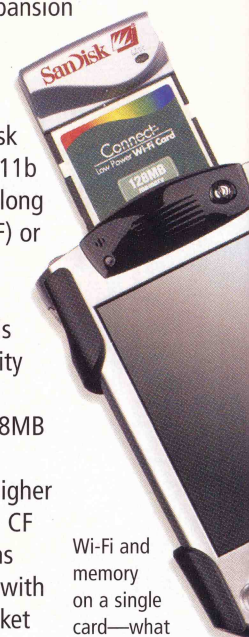
The only downside we can see is the 640x480 (VGA) resolution for still photos—a far cry from two or three megapixels. We'll give you the full skinny on this \$399 jack-of-all-trades in a future issue, provided we can find some nicer Panasonic reps to loan us a review unit.



Camera, camcorder, jukebox, and more: the SV-AV30 even has a swiveling screen.

SanDisk Serves Up Wi-Fi/Storage Combo Cards

In January, SanDisk (www.sandisk.com) unveiled the first CompactFlash (CF) and Secure Digital (SD) expansion cards to include both memory and wireless communications technology. The SanDisk Connect features 802.11b "Wi-Fi" connectivity along with either 128MB (CF) or 256MB (SD) of flash memory. A 256MB CF version is due later this year. The higher-capacity cards will be priced at \$149.95, while the 128MB version will sell for \$129.95—not much higher than some standalone CF Wi-Fi cards. All versions should be compatible with both Palm OS and Pocket PC handhelds.



Wi-Fi and memory on a single card—what a concept!

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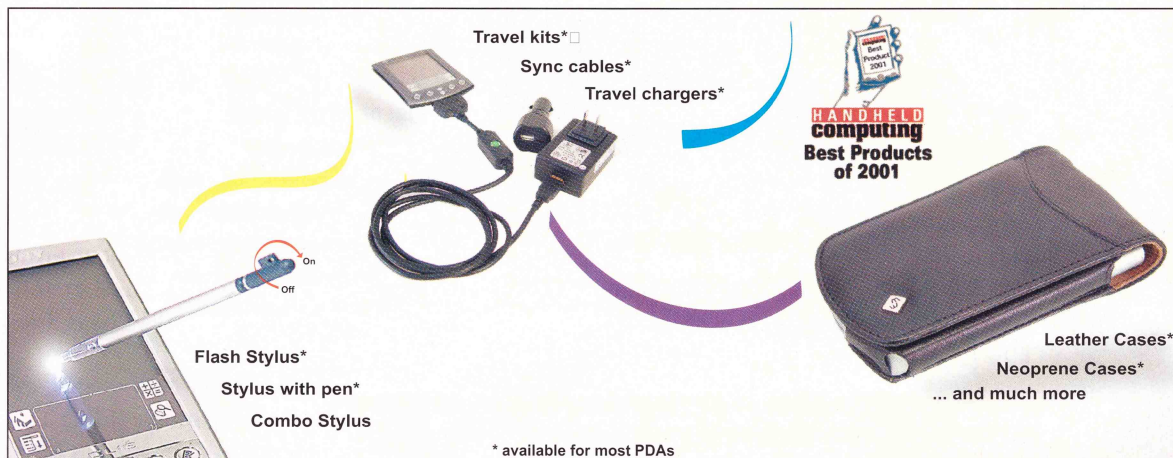


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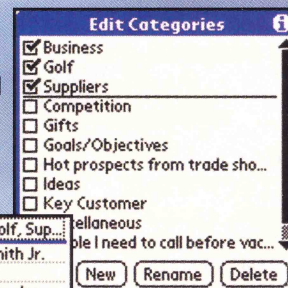
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new!

Prime-Time Pocket Video

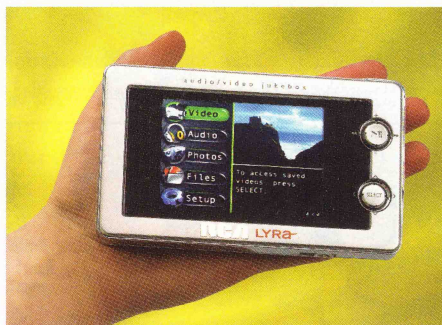
We don't hate to say we told you so—we love it! As we predicted several issues back, pocket-size video players are about to hit the big time. Witness the three new devices unveiled at this year's Consumer Electronics Show: the Archos AV140 (www.archos.com), RCA Lyra RD2780 (www.rca.com), and ViewSonic PVP (www.viewsonic.com).

The latter, built on Microsoft's just-announced Media2Go platform, features



a 3.5-inch, 240x320-pixel color screen and 10GB hard drive, which ViewSonic says is large enough to

store seven hours of video content. The PVP (most likely not its final name) should be available this fall; no price has been set.



Far more tantalizing is the Lyra, a 20GB “digital entertainment experience” that sports a 3.5-inch TFT screen and measures 3.1x5.2x1 inches (HWD). RCA says it can store “up to 80 hours of pre-recorded television shows, feature films, or home videos,” accommodate up to 100,000 JPEG images, and play MP3, MP3pro, and WMA music files. And because it's compatible with multiple video codecs, you shouldn't have to jump through the usual time-consuming hoops to convert video files before



For anyone who thinks portable DVD players are too bulky, say hello to the next generation of mobile video.

watching them. Watch for the Lyra to appear this summer with a very appealing price tag of \$399.

The Archos AV140 is a souped-up version of the “Best of 2002” Jukebox Multimedia 20 (see Issue 6.0). It has a faster processor, a 40GB hard drive, and support for higher video resolutions. It can also encode MPEG-4 video directly from an outside source (like a TV or DVD player). Alas, it still has the same small screen, so it won't afford quite the same viewing experience as the other players. But you won't have to wait as long to get it: at press time, it was due to ship in February. Watch for a review in our next issue.

It's All in the Wrist

It's called Smart Personal Objects Technology—SPOT for short—and you may be seeing it soon in everything from key chains to refrigerator magnets. Unveiled by Bill Gates at the 2003 Consumer Electronics Show, Microsoft's SPOT wirelessly delivers real-time information to “personal objects” like, well, key chains and refrigerator magnets. And especially wristwatches. Fossil (www.fossil.com), makers of the Palm OS-based Wrist PDA, showed us a prototype SPOT watch that could receive news, weather, sports scores, and lots of other information. But it's not all pushed at random like on a pager—you get to choose what kind of info you receive. Still not impressed? You can receive instant messages on it, too. Still not impressed? SPOT relies on FM radio technology, so coverage is almost universal. Watch for Fossil's SPOT watch around the end of summer. We will be.



Coming Next Issue

Ultimate Entertainment Guide You didn't think your handheld PC was just an address book, did you? Music, movies, games, e-books—there's no end to the entertainment you can pack into your pocket. Find out how to rip music and movies, where to score the best games and books, and how to squeeze it all into your PDA in our unprecedented, issue-spanning superguide.

3..2..1..Launch! Customize your handheld like never before with our roundup of the latest and greatest program launchers.

Reviews and More Reviews You think we packed a lot into this issue? We've got even more cool stuff lined up for next time, including Sony's latest handheld, the Archos AV140, new MP3 players from Bantam and iRiver, new cameras from Hewlett-Packard, and tons of Palm OS and Pocket PC software and accessories. Don't miss it!



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Graffiti: R.I.P.

Everything you need to know about Graffiti 2—and some essential “Graffiti 1” tools

by Rick Broida

As you’ve probably heard, Graffiti—the handwriting recognition software built into every Palm Powered PDA since the Pilot 1000—is dead. In January, PalmSource announced plans to integrate CIC’s Jot—ostensibly a better Graffiti than Graffiti—into present and future Palm OS handhelds. Why the sudden change? We can likely give thanks to Xerox, which filed a

“improved” edition), PalmSource seems intent on eradicating our beloved Graffiti. The OS branch of Palm, Inc., has already issued updated versions of OS 4 and OS 5 to licensees—versions that replace “Graffiti 1” with Graffiti 2. Once you upgrade, you’ll be a Graffiti 2 user for the duration, like it or not.

Obviously you should find out if you like it before you upgrade your handheld (note that the Graffiti 2

the “write anywhere” feature is up to individual hardware manufacturers.

Why omit that feature? There are countless known issues of Jot fouling up third-party software. Indeed, I suspect Graffiti 2 will cause more havoc and incompatibilities than OS 5, forcing developers to spend more time and money updating their products. Games in particular don’t get along with Jot, as the screen interprets taps and strokes as data entry, not game moves. Same goes for scrolling around in maps and photos. We could be looking at a major usability mess; watch these pages for a full report after we log some serious Graffiti 2 time.

Critical Hit

PhotoSkin

(www.palmgear.com)

is a way-cool skin manager for Clie NR/NX handhelds.

Among other features, it turns photos you’ve snapped into Graffiti skins.

WE'RE GONNA MISS
YOU, GRAFFITI...

If you can read this, you’re a Graffiti user.

patented software. A federal judge dismissed the case, but Xerox won on appeal. No ruling has been issued, but the damage is done: PalmSource has bid goodbye to Graffiti forever.

Sigh. I suppose change is inevitable, but I hate when it’s forced on me by lawyers. The next Palm OS handheld I buy will require me to learn a new method of data entry, and while the learning curve is slight, I’ve got better things to do with my time. Meanwhile, just as George Lucas went temporarily insane by destroying all prints of the original Star Wars (leaving only his

lawsuit in 1997 that claimed Palm derived Graffiti from Xerox-

updates aren’t currently available) or buy a new one. You can do exactly that by downloading the trial version of Jot from CIC (www.cic.com). For the record, lest I sound too anti-Jot, I like the product and it’s myriad advantages over Graffiti. For starters, you’re not restricted to the Graffiti area; Jot lets you write anywhere on the screen (ideal for Tungsten and Treo users). It leaves a trail of “ink” so you can see your characters as you write them. It lets you make capital letters without having to switch modes. And it relies on a more natural character set than Graffiti’s—no special strokes to learn for V, Q, X, and other obstinate letters. Graffiti 2 won’t include Jot’s ink trail feature, though, and inclusion of

If you plan to stick it out with Graffiti 1, don’t make another stroke without two essential utilities. The first is MiddleCaps Hack, which produces capital letters when you write across the invisible line separating Graffiti’s alpha and numeric halves. The second is TealEcho, which, like Graffiti 2, displays your stylus strokes onscreen as you make them. It’s invaluable for improving Graffiti accuracy. MiddleCaps (free) and TealEcho (\$11.95) both require a Hack manager like X-Master (also free); all are available from PalmGear.com.

Rick Broida is co-author of How to Do Everything With Your Palm Handheld, 3rd Edition, and editor of Handheld Computing.

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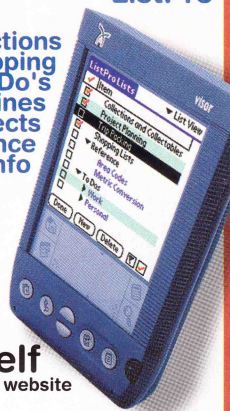
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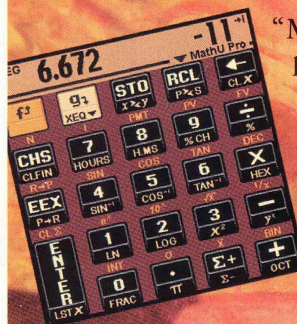
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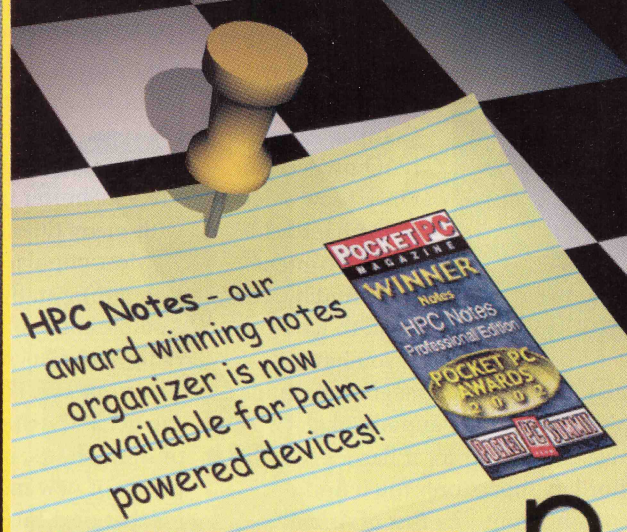


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Audio on the Go

Turn off that radio and turn up the Pocket PC

by Denny Atkin

Whether you're trying to pass the time on a cross-country flight, or you just want to drown out the rambling coming from the cubicle next to you, the Pocket PC's audio capabilities can be a sanity saver. Your boss might frown at seeing your ears wired to a CD or MP3 player, but something about headphones plugged into an iPAQ seems to imply "work." However, jamming to Jennifer Lopez or the Stones doesn't do much to pass the time on a long flight, and the telltale drumming-to-the-beat on your desk will quickly kill the illusion that

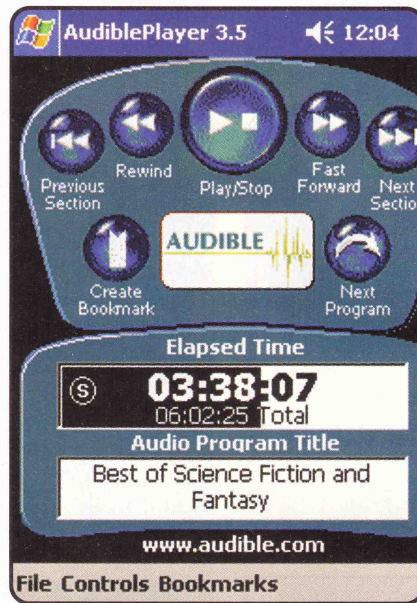
you're doing something productive.

Instead, why not listen to an audiobook or your favorite radio show?

In fact, it was this capability that sold me on my Windows CE Compaq Aero, an iPAQ predecessor. Once I saw a demo of the handheld playing content from Audible.com, I had to have one.

If you haven't

visited Audible.com, imagine an online bookshop that's the audiobook equivalent of your local Barnes & Noble or Borders superstore. You'll find everything from *The Best of Asimov's Science Fiction Magazine 2002* to John Grisham's latest *The King of Torts* to the unabridged version of Jane Austen's



An Audible.com advantage: a six-hour audiobook takes up just 12.6MB—a fraction of the size of a similar MP3 or WMV file.

Pride and Prejudice. The prices are very reasonable. The 5 1/2-hour unabridged *Isaac Asimov's Science Fiction Favorites*, for instance, costs \$44.98 on cassette at BN.com. At Audible.com, you can download the same content for just \$16.95. Shorter programs are even less, with many titles available for \$3 to \$5.

Most popular among the *Handheld Computing* staff, though, are Audible.com's offerings of various NPR radio shows such as *Car Talk* and *This American Life*. For about \$45/year, you can get a 52-issue subscription to either of these shows, insuring you'll have plenty of new material listening available for that next business trip or hour spent in a waiting room. Or use an adapter like the SF121 SoundFeeder or Powered Multimedia Mount from Arkon

Resources (www.arkon.com) to transmit Pocket PC audio to your car stereo during long commutes. (Note that Audible.com files can now be played back on the Palm Tungsten T in addition to Pocket PCs.)

We love the one-click convenience of downloading an audio program to our Pocket PC that Audible.com offers, but those of you who don't mind putting in a little extra effort can actually turn your PC into a sort of "audio Tivo," making your own recordings of Internet radio programs.

If you have a Creative Labs SoundBlaster Audigy-series sound card, you can use the bundled Audio Stream Recorder software to record live audio streams, schedule timed recordings, or capture archived programs. Audio Stream Recorder will save files in MP3 or WMA formats, either of which can be played on a Pocket PC.

Others will want to check out High Criteria's Total Recorder (www.highcriteria.com), available for just \$11.95. This program's features make it particularly suited to recording Internet audio. It can remove gaps—those empty spaces that occur when audio streams pause—but even better is its ability to accelerate recording. Most recorders are "real-time." That is, it takes an hour to record an hour-long program. With many sites, Total Recorder can bring down data and convert it to MP3 as fast as your connection allows. That means you can often record an hour-long program in 15 minutes or less.

Between audio and GPS, Denny Atkin thinks his Pocket PC is the best peripheral you can buy for a Mazda Miata.

Critical Hit

Looking for some sites with great spoken audio content to record? Some of our favorite sources are www.npr.org, www.freshair.com, www.thislife.com, www.cars.com/cartalk, and www.bbc.co.uk/radio

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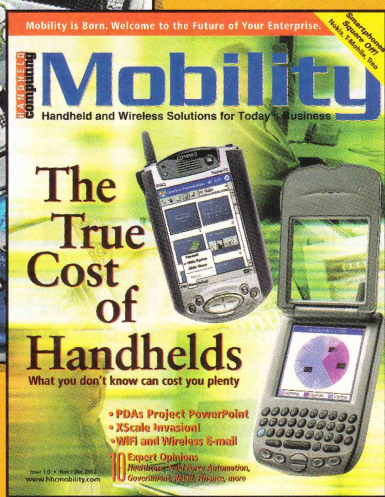


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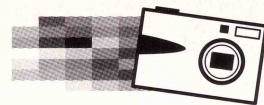
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Managing A Million Photos

Easy answers to the big question facing digital camera buyers

By Dave Johnson

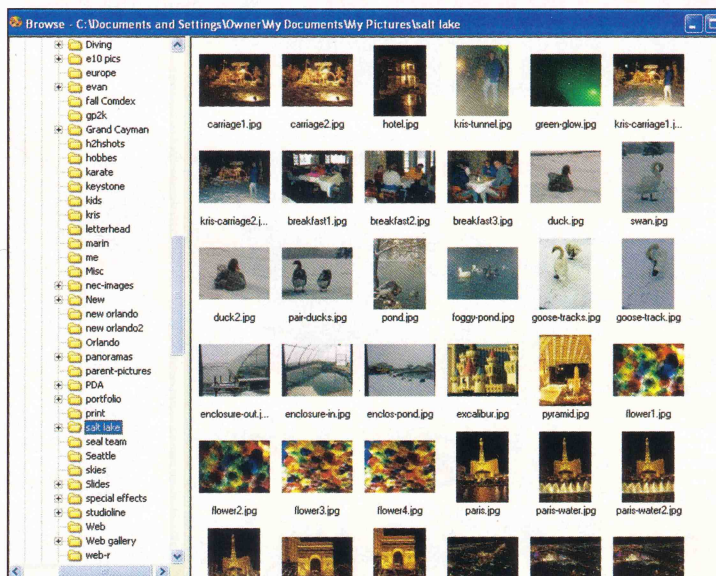
So, you no longer buy film, think in terms of 24-exposure photo sessions, or pay for processing. That probably means you're taking a lot more pictures than ever before. With luck, you're experimenting more, too: taking pictures of the same scene from multiple angles and fiddling with the exposure controls.

That's great, but there's a down-side to all this. Your hard disk can quickly start to look like a digital version of my

garage, littered with hundreds—perhaps even thousands—of unorganized photos. Some are titled, while others say stuff like DSC030256.jpg. What the heck is that supposed to be? And how can you find a specific picture when you need it?

For starters, a little elbow grease up front pays off in spades later on.

Whenever you copy images to your PC from a digital camera, rename the images right then and there. Later, you'll appreciate being able to use the Windows Search tool (in the Start menu) to look for individual pictures. If you're importing a huge number of photos and don't want to rename each and every one of them, consider renaming the whole batch with a single label. If you have Windows XP, just select all the images (you can select



How organized are the images on your hard disk?

multiple photos at once by holding down the CTRL key while you click), right-click, and choose Rename from the pop-up menu. Type a name for the images and press Enter. Windows gives that name to all the selected files, but also attaches a number to the end to tell them apart. That way you can at least name them after a specific event (like "vacation" or "baby shower"), making them easier to find.

Windows XP can also help straighten out your new photos—literally. Have a bunch of sideways images because you shot them with the camera turned 90 degrees? Stop twisting your head. When you copy them to your hard disk, select all the pictures that are on their sides and right-click. You should see the option to rotate them clockwise or counter-clockwise. Make your selection and Windows will do the rest.

And while Windows is kind enough to give you a folder to store your

pictures—called My Pictures, in fact—I wouldn't recommend cramming a thousand pictures in there with no organization. Create a slew of unique folders within the My Pictures folder, and sort your photos by criteria like

event, subject, and topic. Resist the temptation to make a folder called New; even if you plan to go back later and sort them, it'll never happen. Eventually, you'll have two years' worth of images in a folder called File-These-Soon.

Finally, nothing helps you get organized faster than using some sort of photo organizer software. You might want to try Jasc's **Paint Shop Photo Album** (formerly known as After Shot, and found at www.jasc.com) or **ACDSee** (www.acdsystems.com). Since these sorts of programs let you view image by thumbnail and associate keywords with each of your photos, you can locate a photo by even if you don't recall the title. Want to get organized on the cheap? Try **Predlick** (www.predlick.com)—it's free.

Dave Johnson was recently awarded a Pulitzer Prize for How to Do Everything with Your Digital Camera, 2nd Edition, from Osborne/McGraw-Hill.

Critical Hit

Adobe's newest photo organizer, **Photoshop Album** (www.adobe.com), is the best image manager I've ever seen. It uses crackerjack labeling features to manage and organize your pix.



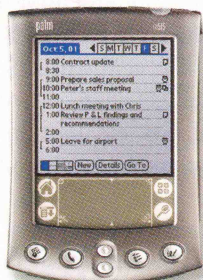
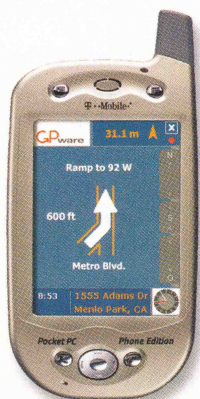
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Build an MP3 Home Stereo

You'll be surprised at how big a small stereo can be

By Rick Broida

When we remodeled our living room to become a full-time playroom for the kids, the first thing to go was the entertainment center—and my stereo along with it. Goodbye, 200-CD jukebox. So long, waist-high speakers and 400-watt receiver. Talk about the day the music died...

But we missed hearing our tunes while we made dinner and played with the kids, so I decided to seek a high-tech resurrection. As the co-author of *How to Do Everything with MP3 and Digital Music* and a shameless self-promoter, surely I could design a home stereo that contained

my extensive music collection but still fit in a crowded playroom.

My first thought was one of those flat, hang-on-the-wall stereos you see at The Sharper Image. But though I searched high and low, I couldn't find one that played MP3 CDs—discs packed with

upwards of 150 songs. There are portable CD players that can—Sonicblue's excellent **RioVolt SP350** (www.sonicblue.com) among them—so that became Plan B.

However, portable players don't come with speakers. And if I was going to need speakers anyway, it made sense to try Plan C: a wholly digital setup. That meant an MP3 player with a built-in hard drive, one large enough to hold an expanding music library.



Can you spot the 1,200 songs in this picture?

The speakers were the easy part. My criteria were simple: compact, stylish, subwoofer included, and priced under \$100. As fate and timing would have it, I found two perfect matches at the 2003 Consumer Electronics Show: the Altec Lansing **2100** (www.alteclansing.com) and Creative **I-Trigue 2.1 3300** (www.creative.com). Both sets sounded stellar, looked cool, and cost \$99.

Choosing the ideal MP3 player proved a lot tougher. I'd already stocked a 5GB Apple iPod with my tunes, but it was almost too mobile for the job; it comes with me when I drive or fly. I considered the Archos Jukebox FM (see review in this issue), but seriously disliked its limited shuffle-play capabilities. Creative's Nomad Jukebox 3 and Jukebox Zen had similar issues. Thus I settled on the Digital Innovations Neuros (also reviewed in this issue), which shuffle-plays like a champ and doubles as an FM radio. It's among the pricier hard-drive players available today, but its 20GB

backpack is ample for me—and I can upgrade in the future if necessary.

The setup isn't perfect. I miss having a wireless remote to control volume and select tracks. I miss the large, easy-to-read buttons and displays of my stereo. And if I want to add music, I have to transport the Neuros to my PC and upload it—can't just pop in a new CD. (One point in favor of using a portable player like the RioVolt as the core component.)

Still, the benefits of the MP3 home stereo far outweigh the shortcomings. I don't need enormous, expensive CD changers to store a mountain of music. I can easily relocate everything to another room in the house. Best of all, I can keep the hardware out of reach of little fingers.

For sale: gently used Sony 200-disc carousel CD changer, with remote, manual, box, etc. Best offer. Send e-mail to lamewaytoendacolumn@hhcmag.com.

Rick Broida would appreciate it if everyone bought three copies of How to Do Everything With MP3 and Digital Music.

Critical Hit

Got Wi-Fi? Then get a cd30 c300 (www.cd30.com), which wirelessly transmits tunes from your PC to your home stereo and even has its own remote.



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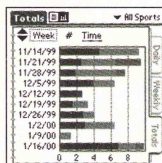
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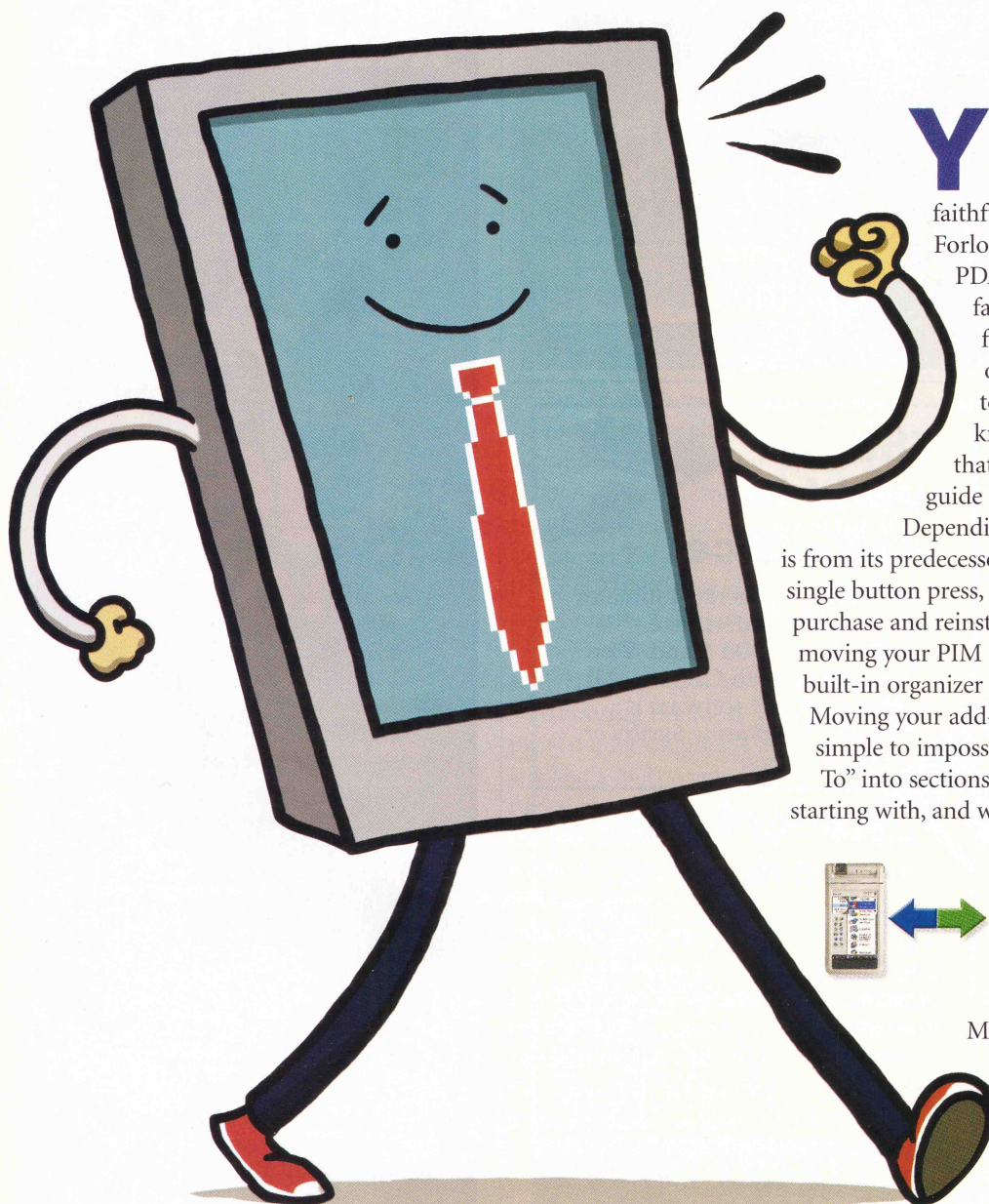
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Upgrading to a New PDA

The definitive guide to moving to a new handheld without leaving your data behind

by Denny Atkin



Your hot new handheld sits in its cradle, charging its batteries and preparing to spend its time by your side as your faithful repository of important information. Forlornly sitting next to it is your long-time PDA companion, about to be replaced after faithful service by a smarter, faster, and flashier unit. But before you put your old PDA out to pasture or pass it down to the kids, you want it to share its knowledge with its replacement. And that's why we're here, with our complete guide to upgrading your handheld.

Depending on how different your new handheld is from its predecessor, the process can be as simple as a single button press, or as complicated as having to re-purchase and reinstall all your add-on software. In all cases, moving your PIM (Personal Information Manager; the built-in organizer applications) data is relatively easy. Moving your add-on programs, however, ranges from simple to impossible. We've broken this "Handheld How-To" into sections based on which operating system you're starting with, and which one you'll be using going forward.



Palm OS ▶ ◀ Pocket PC

While there are fans of Microsoft Outlook on the *Handheld Computing* staff, some of us think the old

Magic 8-Ball said it best: "Outlook not so good." But even if you choose to use Palm Desktop or another program instead of

Microsoft's information manager, Outlook remains the best tool for easily moving your organizer data between handhelds that run different operating systems. (Note that the tips in this section apply whether you're switching from Palm OS to Pocket PC, or Pocket PC to Palm OS.)

All Palm OS handhelds include an Outlook HotSync conduit on their install CDs. Sony Cliés include Pumatech's IntelliSync Lite; most other brands ship with Chapura's PocketMirror. Whether you're switching from Pocket PC to Palm OS or vice versa, the first thing you'll want to do is break out the Palm OS device's install CD and install the Outlook sync utility.

Once your Outlook conduit is installed, the PIM data transfer is a snap. Synchronize the original device to its PIM information to Outlook. Then synchronize the new device and all the PIM data will be downloaded to it. If you continue to use both the Palm OS and Pocket PC handhelds, leaving the Outlook conduit in place will let you keep the PIM data on both devices in sync.

If you want to keep the PIM data separate going forward, or you simply don't want to use Outlook with your Palm OS device, just go to the Windows Control Panel, choose Add/Remove Programs, and remove PocketMirror or IntelliSync Lite. The Palm OS handheld will now go back to synchronizing with Palm Desktop. (In rare cases, you may need to reinstall Palm Desktop after removing the Outlook Conduit.)

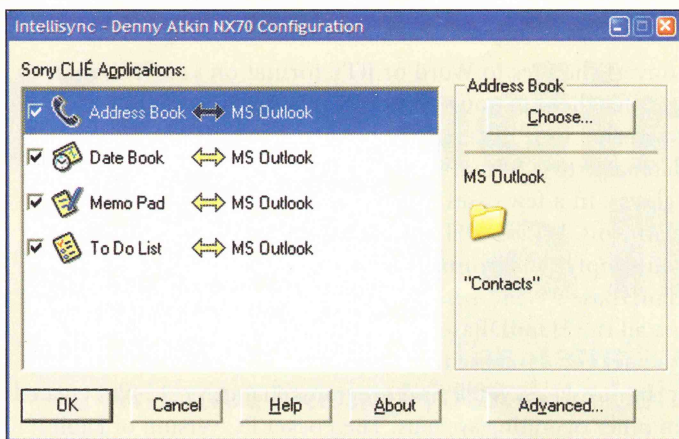
Even though the newer Palm OS units use the same basic microprocessor as Pocket PCs, you can no more run the same applications on the two devices than you can run a Macintosh program on a Windows PC. So you'll have to bite the bullet and replace any third-party software you've installed on your old handheld. In some cases, developers who support both platforms will offer a cross-platform upgrade at a lower-than-retail price. Even if the developer doesn't advertise such an upgrade, it can't hurt to e-mail the company and ask if the option is available.

To transfer data from third-party programs, your best bet is to convert your information to a common format used by your desktop computer. For instance, to get documents from WordSmith or Quickwrite on a Palm OS handheld to Pocket Word or TextMaker on a Pocket PC,

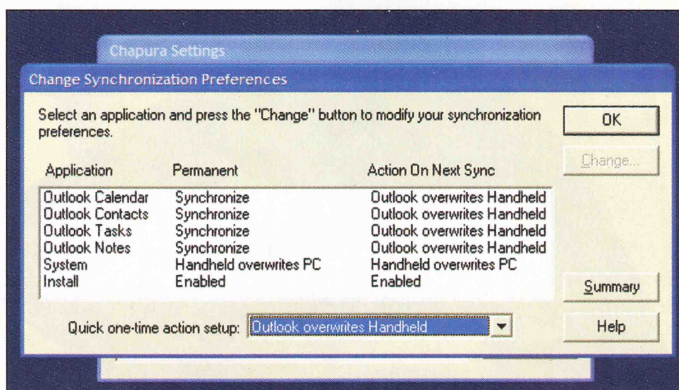
convert the files to Word or RTF format on your PC, then transfer them to your Pocket PC. Picture files can be converted to JPEG format, spreadsheets to Excel, and databases to a format such as CSV (comma-separated values). In a few cases, applications directly support both platforms. With DDH Software's HanDBase, for example, you simply synchronize your data from one handheld to HanDBase's Windows desktop companion application, then install the HanDBase version for your new handheld and transfer the database to the new PDA.

In rare cases, you'll find programs that can read files created on other operating systems. The Pocket PC version of Palm Digital Media's Palm Reader, for instance, can read e-books saved in the Palm Doc format. Mobipocket Reader uses the same file format





Sony Clié handhelds include IntelliSync Lite, a useful tool for getting data to and from Outlook.



If you're using PocketMirror to transfer Outlook data to a new Palm OS handheld, you may want to choose "Outlook overwrites Handheld" for the first sync

not only for Palm OS and Pocket PC, but for the Franklin eBookman and Symbian OS PDAs and phones as well.



Palm OS ► Palm OS

In the good old days, upgrading from one Palm OS device to another was a simple process: Plug in the new cradle and HotSync. All the data would be transferred from the older device and you'd be set to go. With the advent of USB cradles—and different USB drivers for every handheld—plus a mishmash of customized versions of Palm Desktop shipping with various PDAs, the process has grown more complicated. (See the sidebar "Multiple Handhelds and Palm Desktop Confusion" for the worst-case scenario.)

Still, in many cases you can simply install the software that comes with your new handheld and HotSync the new PDA. (Be sure to install the new Palm Desktop in the same directory as your old copy; while earlier handhelds usually installed the program in *C:\Palm*, newer units default to *C:\Program*

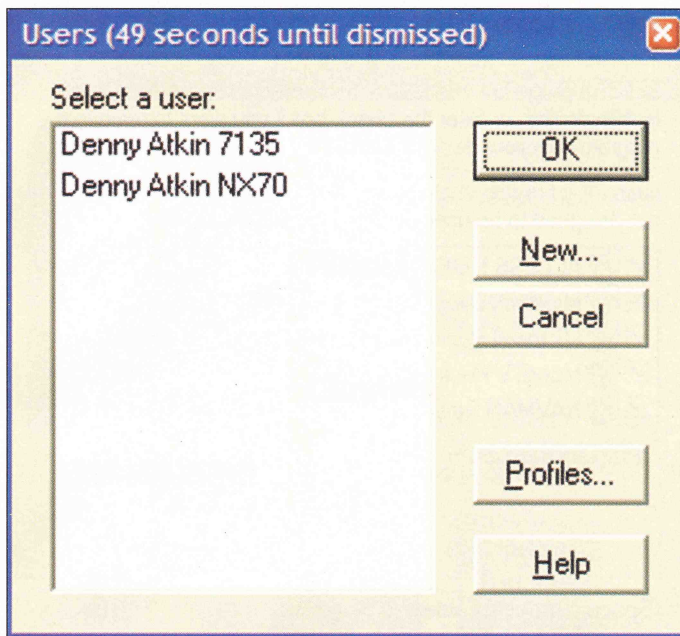
Files\Palm or *C:\Program Files\Sony Handheld*.) When the "Users" window pops up to ask you to select a HotSync ID, just click on the name you were using for your previous PDA. HotSync will then copy all of the information—including PIM information, programs, and data files—from your old PDA to the new one.

Before you HotSync the new handheld, however, take a good look at the third-party applications you have installed on your old device, particularly if you haven't updated them in a while. Chances are, that great little utility that you installed back in 1999 has been updated a number of times. These updates may very well be necessary for compatibility with your new handheld, or to take advantage of its advanced features. We suggest upgrading all of the applications on your old handheld to the latest versions before attempting an upgrade via HotSync.

Once you've synchronized the new handheld, you'll want to change the HotSync ID of your older device if you plan to continue using it on the same PC, as you can't sync two different devices with the same HotSync ID on the same computer. Just do a hard reset (hold down the power button while pressing the reset switch on the back of the handheld; note that this will erase all its contents) and choose a new ID for it the next time you HotSync. (If you don't want to hard reset the device, see the "Top 5 Upgrade Tips" sidebar.)

If your new handheld has significantly different capabilities than the one you're replacing—say, you're shifting from monochrome to color, or from a Clié to a Treo—we recommend you consider reinstalling everything. Why? We've seen some odd behaviors caused by "legacy" settings left over in preferences and data files. Older versions of AvantGo wouldn't recognize that you were now running on a color PDA, for instance, and settings from early versions of the Palm OS can disable certain shortcuts on newer handhelds. Also, if moving from, say, a Clié to a Tungsten T, you'll end up wasting memory on a variety of data files associated with applications built into the Clié that aren't present on the Tungsten T. And in some cases, you may not have enough memory to transfer all the contents. For example, although they're both 16MB devices, a Handspring Visor Pro has nearly 16MB of free memory, while a Sony NX70V has just 11MB. For the most trouble-free upgrade experience, consider reinstalling all your third-party applications.

You can do this while still maintaining all your contacts, to-dos, memos, and appointments. On the PC, you need to find the directory in the main Palm subdirectory (usually *C:\Palm* or *C:\Program Files\Palm*) where your handheld's data is backed up. The name is based on your HotSync name; in my case, it's "AtkinD." Within that directory, you'll find another subdirectory called "Backup." You want to rename this (in case you find you need something in it later, such as a database file)



The first time you HotSync your new handheld, choosing the same HotSync name as your old unit will copy all your old data to the new device.

to Backup-Old, and then create a new, empty Backup directory. Now, when you HotSync the new device and select your old user name, all the data for the built-in programs will be transferred to the new handheld, but your third-party applications and system preferences won't be. At this point, you can reinstall the latest versions of the applications you want to continue using. It's a hassle, but it insures that you won't see any odd behaviors from programs on your new handheld. Note that you can also use this technique to "clear out" your current Palm OS handheld if you're seeing odd interactions between programs. Just HotSync, do a hard reset, and follow the instructions above.

Keep in mind that this procedure only transfers the data from the built-in PIM applications. Data files for third-party applications such as WordSmith, Quicksheet, or SplashPhoto won't be reinstalled. After you reinstall the application, you can transfer the data to your new handheld from your desktop PC, if there's an accompanying desktop application. If not, you can find the original databases in the Backup-Old directory you created earlier. Check your program's documentation to determine the name of the data file—it will almost always end in .PDB—and then just double-click it to add it to the HotSync install queue.



Pocket PC ► Pocket PC

Upgrading from a Windows CE or Pocket PC device to a new Pocket PC 2002 unit is a fairly labor-intensive process. The good news is that your PIM data will transfer from Outlook to the new handheld automatically. The bad news is that you'll need to reinstall all your third party applications—there's no way to automatically transfer the programs and settings from one Pocket PC to another.

To transfer your PIM data, just install your new Pocket PC's cradle and software. When you ActiveSync, all your Outlook data will be transferred to the new PDA. Even if you already have ActiveSync installed, you'll still want to install the version that comes with your new PDA, as this will include the necessary USB drivers for your new device. Note that, while many older Pocket PCs shipped with Outlook 2002, newer devices ship with the crusty old Outlook 2000. If you're already running Outlook 2002, just install ActiveSync and skip the Outlook install.

There's no way to easily transfer your installed applications and settings to a new Pocket PC, as you can with Palm OS devices. Because there are differences in how the Pocket PC

Palm Desktop Version Madness

We recently ran into difficulty trying to install a Sony Clié NX70V on a system that was already using a Kyocera 7135. Kyocera included Palm Desktop 4.1; Sony, version 4.0. When we installed the Sony CD (necessary to install the USB HotSync drivers), it removed Palm Desktop 4.1—and suddenly the 7135 would no longer HotSync. Once we reinstalled Palm Desktop 4.1 using the CD included with the 7135, both the Clié and the 7135 synchronized successfully. Similarly, when installing a Tungsten T on the same system, we had to upgrade to the Palm Desktop 4.1 version included with it, as the Palm Desktop 4.1 on the 7135 CD didn't support the Tungsten T's voice recorder or NotePad applications.

The key to success here is to determine which device includes the newest release of the Palm Desktop software, and then installing in the order of oldest-to-newest, being sure to HotSync each device right after installing its accompanying CD. Given the devices above, for instance, you'd want to install the Clié NX70V software, then the Kyocera 7135 software, and finally the Palm Tungsten T CD.

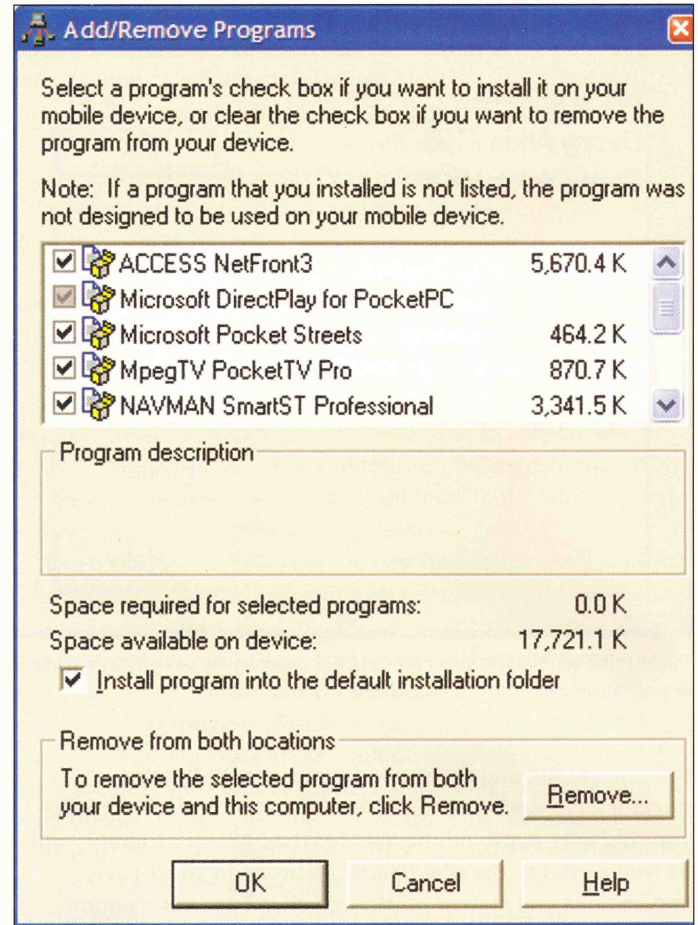
As it stands, it's easier to install a Pocket PC as a companion to a Clié than it is to install a Palm. It's time for PalmSource to work with the hardware manufacturers and come up with a unified Palm Desktop/HotSync/USB installer that works across the board.

2002 operating system is configured—the Pocket PC stores many of its settings in a convoluted Registry just like the desktop version of Windows—you'll need to reinstall your software from scratch. This is a good excuse to comb the web sites of your favorite applications and make sure you have the latest versions on-hand before installing. If you're upgrading from an early Casio, HP, or other Pocket PC that didn't use an ARM processor, the older installation files may not be compatible with Pocket PC 2002.

Reinstalling applications is simplified if you initially installed all the programs on your Pocket PC from a single desktop computer. In this case, make sure your new Pocket PC is in its cradle, open ActiveSync on your desktop PC, choose Add/Remove programs from the Tools Menu, and check all of the programs you'd like to install. They'll be automatically transferred to your new Pocket PC. If you installed any programs on a different PC, however, you'll need to use the original installation file.

Once you have your applications reinstalled, you can restore the data files for many third-party applications by copying the contents of your original handheld's Pocket_PC My Documents folder on your PC to the My Documents folder that was created for your new PDA. This will generally copy items like document files, pictures, and databases, but not settings like registration codes, which are stored in the Pocket PC's Registry.

Note that it's possible to transfer the entire contents of one Pocket PC to another using programs like Sprite Software's Sprite Clone or Pocket Backup. However, because of differences in registry settings, ROM revisions, and Pocket PC OS End User Updates, you're almost sure to encounter problems if you move all the data from one Pocket PC to another. ♦



The Add/Remove programs feature in ActiveSync can simplify installing your old programs on a new Pocket PC.

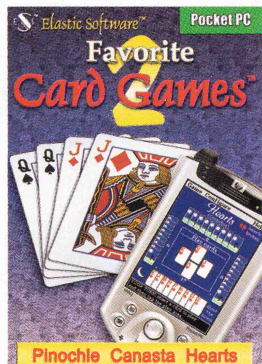
Top 5 Upgrade Tips:

- 1 Before upgrading a handheld, download the latest versions of all third-party applications that you use. Now's the perfect time to be sure you're not using a dated version that might not support your new handheld.
- 2 If you've installed a new USB-based Palm OS handheld and you're still using a serial cradle on the same PC, click on the HotSync manager and insure that "Local Serial" is checked—by default, it's not selected on newer versions of Palm Desktop.
- 3 Remember that most third-party Palm OS applications use registration codes based on your HotSync ID. So be sure to give your new handheld the same HotSync ID as your old one, or you'll have to contact your program's publisher for a new registration code.

(In rare cases, codes are based on the device's internal serial number, and you'll still need a new code.)

- 4 If you want to change the HotSync name on your older Palm OS handheld without doing a hard reset and losing all your data, you can use the utility ChangeName, available at www.palmgear.com.
- 5 If you've changed the HotSync name on an older handheld, but you still need to use software that you registered under that name, download Tweak User from PalmGear.com. It will fool applications into thinking you're using the old HotSync name. (Note that this may violate the application's license agreement, and if you're using an application daily on both handhelds, you should buy a second copy.)

Favorite Card Games 2



Hearts

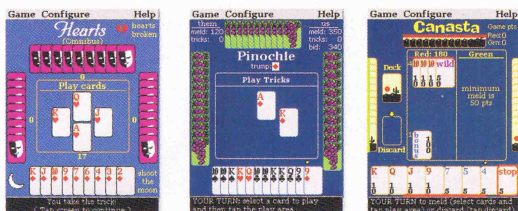
Includes standard game, 'Omnibus' and 'Pink Lady'. Play any game with a partner.

Pinochle

Try 'Partnership Auction' pinochle. Options: 'Firehouse' bid, pass cards, widow, and many others.

Canasta

Canasta, a South American rummy game, uses a 108 card deck with wild, stop, and bonus cards.



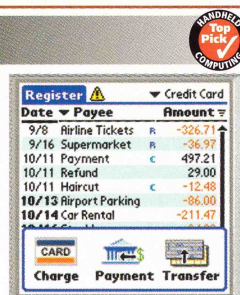
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Pocket Quicken 2.0 makes it simple to keep your financial information complete, accurate and organized wherever you go. Transferring data is quick and hassle free—just press the HotSync button.

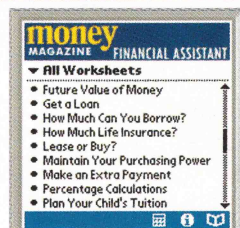
"Pocket Quicken is a great program. Did I say great? I meant life changing! ...you owe it to yourself to try Pocket Quicken!"

— PalmPower Magazine



money magazine financial assistant

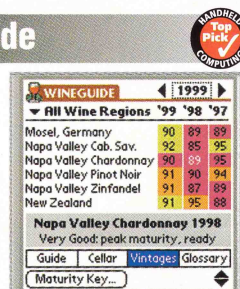
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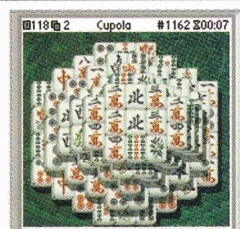
"...for wine connoisseurs and amateurs alike, Wine Enthusiast Guide is a must-have application"
— Handheld Computing Magazine



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The definitive Mah-Jongg has come to the Palm OS and Pocket PC. Choose from over 100 of Activision's Shanghai layouts or create your own layouts, right on your handheld.

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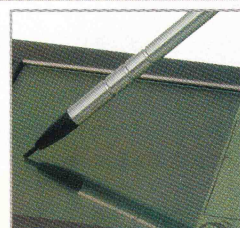
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floating point stylus

floating•point's unique patent pending design provides a writing experience that is both more comfortable and less wearing on the handheld's screen while improving graffiti recognition.

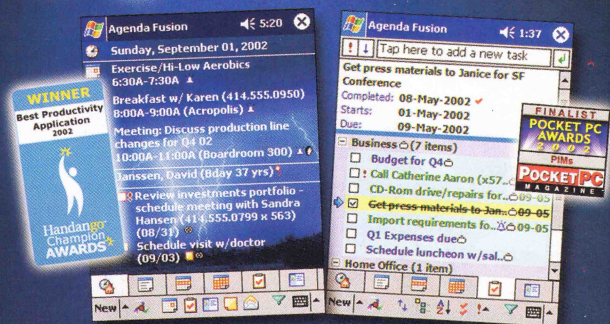
"I was dubious of its claim... but it really does produce more of the feel of a pen on paper, and I got far fewer errors when using it"
— BusinessWeek Magazine



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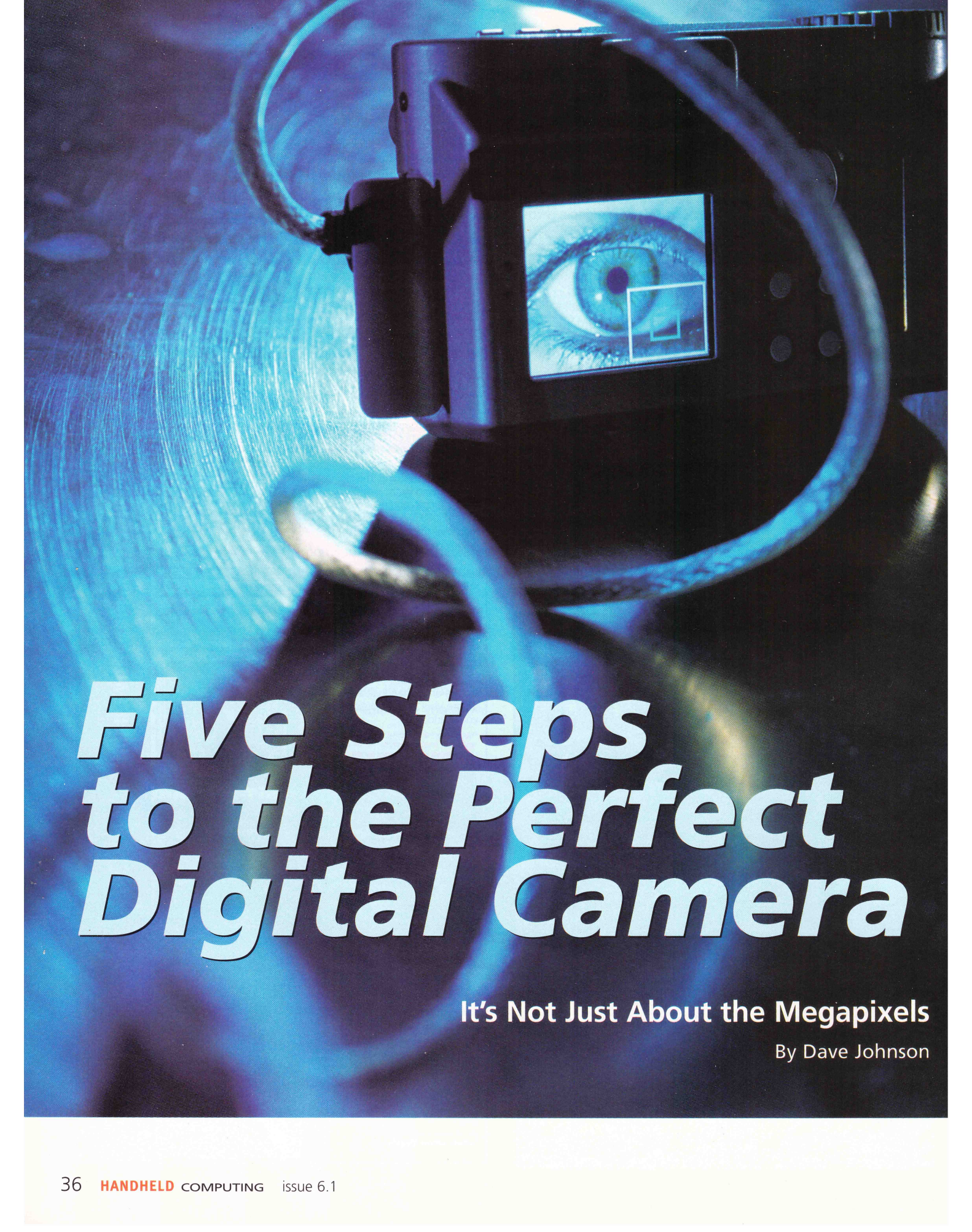
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A digital camera is shown from a side-on perspective, with its LCD screen displaying a close-up of a human eye. The camera is black and has a silver lens. The background is a vibrant blue with swirling, ethereal patterns. The title text is overlaid on the lower half of the image.

Five Steps to the Perfect Digital Camera

It's Not Just About the Megapixels

By Dave Johnson

If you believe the ads, it's all about megapixels. And the more the better! In fact, you might think that finding the right digital camera all comes down to how many pixels it can pack into each image.

Sure, resolution is important—no one is disputing that. But there's a lot more under the hood of today's digital cameras than just a bunch of pixels, and choosing the perfect one involves understanding how all the parts work together. That's why we've prepared this five-step shopping guide. Follow our advice, and you'll end up with a digital camera that will keep you happy for years to come.

1 What Kind of Photographer are You?

Before you even start looking at cameras, it helps to understand what kind of pictures you like to take—and, subsequently, what kind of camera you need. You won't see many salespeople explain digital cameras in this way, but the reality is that there are three main classes of cameras in the world.

Ultra-compact digital cameras—usually priced under \$300—are designed to slip into your pocket, be unobtrusive, and let you quickly snap pictures when the spirit moves you. The Logitech Pocket Digital, for example, is not much larger than a credit card. The Toshiba PDR-T10 is almost as small, but adds a PDA-style touch screen that eliminates the need for an array of buttons to control camera functions. Make no mistake: cameras like these are point and shoot. They afford little exposure control, may not have a flash, and offer limited zoom capabilities. In a nutshell, compact cameras are lifestyle gadgets, great for folks who don't take their photography too seriously but want to capture life as it happens. And remember, a photographic powerhouse

isn't going to do you any good if it's so bulky that you rarely bring it along.

Want a little more control over the photos you shoot? You might be a performance-minded photographer. These cameras are typically a bit bigger (though some can still fit in a pocket) and tend to offer lots of picture-taking options. Expect to see a bevy of programmable and



The Olympus e-10, which sells for under \$1000, is the least expensive pro-level digital camera. Its big brother, the e-20n, costs closer to \$1500.

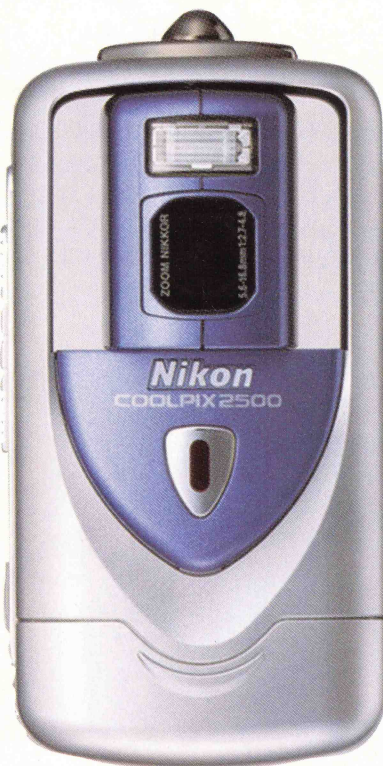


Compact cameras, like this Toshiba PDR-T10, fit in your pocket, ready to snap unexpected pictures of Elvis. Alas, they don't have much resolution.

manual exposure modes, exposure compensation, a macro mode (for taking very close-up pictures), and perhaps even a manual focusing option. Performance cameras range from about \$200-\$800, and the better models deliver a very similar experience to using your old film camera.

Suppose you're an old hand with 35mm SLRs and love the flexibility of switching lenses, taking super-long night exposures, and tweaking every aspect of the exposure process. Your choices here—in the professional

Excellent values—like this \$250 Nikon CoolPix 2500—abound in the 2-3 megapixel range.



digicam arena—are limited and pricey. Expect to pay between \$1,000 and \$3,000 for cameras like the Nikon D100, Canon D60, or Olympus e10. The good news?

Models like these cost \$10,000 or more just a few years ago, so prices are dropping just as quickly as the quality is going up. Check back next year for truly affordable pro-level cameras.

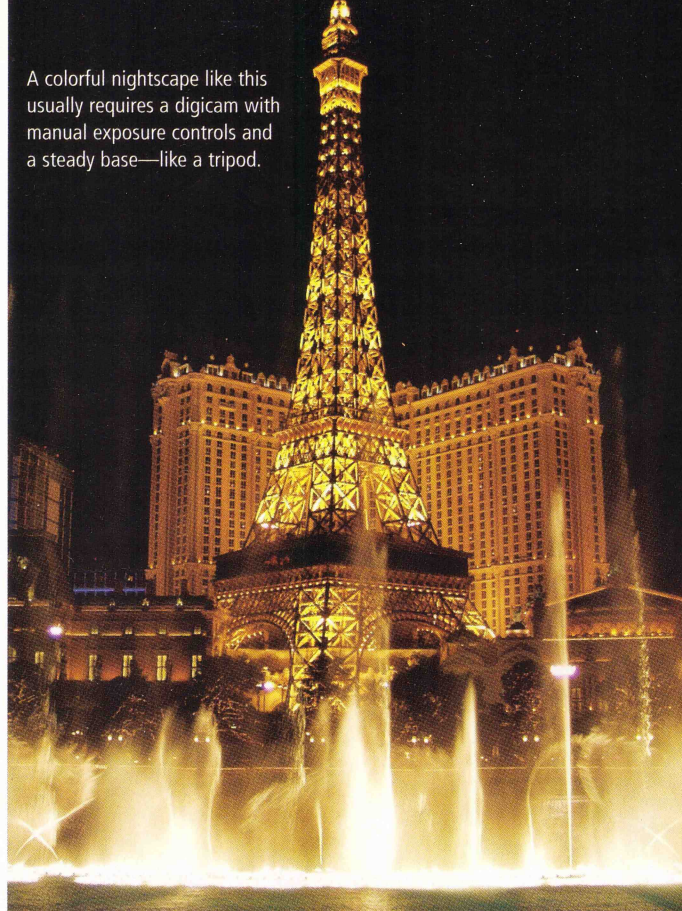
2 Much Ado About Megapixels

As we said earlier, megapixels aren't everything—but they're an important part of the buying decision. Rather than shopping for the most pixels you can afford, you need to first ask yourself: how many pixels do I need?

Here's how to decide. Since "megapixel" simply refers to a million pixels, a camera that shoots 1280x960-pixel images is a one-megapixel camera. A 3-megapixel camera, on the other hand, probably shoots images with about 2000x1500 pixels. So, the question really becomes, what do you plan to do with those pixels? If you enjoy printing 8x10-inch shots and framing them, you'll want a camera with at least 3 million pixels, since you'll need that many to create large prints without obvious jagged edges. If you don't plan to make prints larger than drugstore-standard 4x6 inches, though, 2 megapixels will suit you just fine.

Why might you want more than 3 megapixels? One obvious reason: to produce even larger prints. You can buy wide-format inkjet printers capable of making prints as large as 13x19 inches. But even if you stick with 5x7s or 8x10s, extra pixels come in handy for cropping. That is, if you recompose a 3-megapixel image by cropping it in an image editing program, you've discarded some of the pixels you needed to print it sharply. But if you start with a 5- or 6-megapixel image, you can crop the picture and still end up with the equivalent of a 3-megapixel image for printing at 8x10. So if you're the sort of person who revels in using the digital darkroom to edit images before printing, consider getting a camera that has more megapixels.

A colorful nightscape like this usually requires a digicam with manual exposure controls and a steady base—like a tripod.

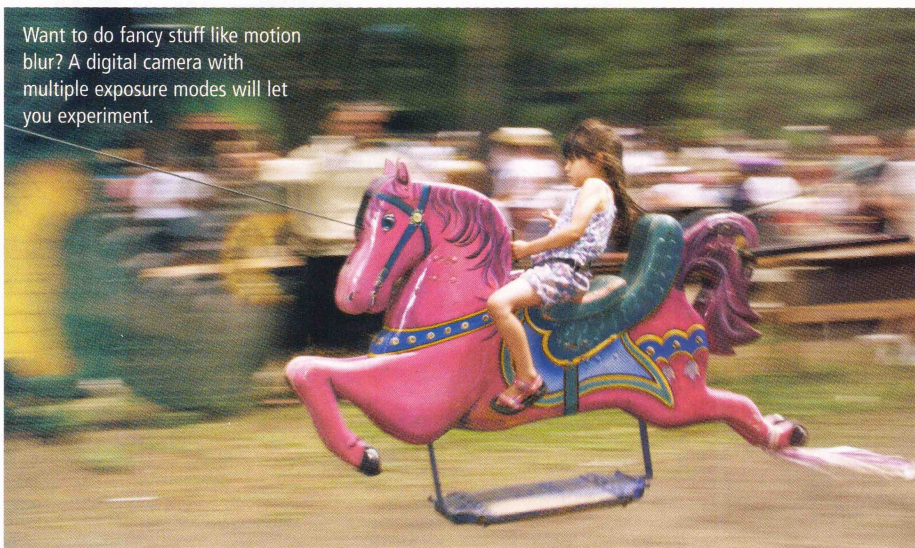


3 The Lens is Mightier Than the Sword

The lens is just about the most important part of camera, so don't take it for granted. Various manufacturers incorporate lenses of varying quality—most use all-glass elements, but there are some inexpensive cameras with plastic lenses that can noticeably affect the quality of your pictures.

And then there's the zoom. Because lenses in digital cameras are rarely interchangeable (you need a professional model for that), most cameras rely on a zoom to let you capture the full gamut of photo opportunities, from wide-angle to telephoto. A 3X lens, for instance, might let you vary the camera's focal length from 8-24mm. Okay, but what is 8mm? Wide angle? Telephoto? What kind of picture will it take? For starters, focal length is the measure of how much the lens will magnify a scene—but focal length numbers for digital cameras are completely different than the ones used by 35mm cameras. Thus, manufacturers

Want to do fancy stuff like motion blur? A digital camera with multiple exposure modes will let you experiment.



often specify the “equivalent” focal length as if the camera were using 35mm film, such as “38-114mm equivalent.”

Why are the numbers for digital and 35mm so different? The focal length of a lens measures how much power the lens has, but it’s based on the size of the film—which, for a digital camera, is a different size than the film in a 35mm camera. Don’t worry about the digital camera’s “real” focal length; just shop based on the 35mm equivalent focal length. That way you can make good comparisons: 28mm is wide angle, 50mm is a “normal” lens, 100mm is good for portraits, and anything over 200mm is considered telephoto.

Most digital cameras feature a 2X, 3X, or 4X lens, but there are exceptions. The Nikon CoolPix 5700 has an 8X zoom, capable of delivering focal lengths from a “normal” 35mm lens to a strong telephoto 280mm. The Olympus C-730 is even more impressive: it delivers a massive 10X zoom that takes you all the way in to 380mm, which is similar to what wildlife photographers use to capture close-ups of skittish animals from far away. But do you need a zoom like that? An 8X or 10X zoom is great if you need to pull in distant scenes, but routine photography—especially indoors—is almost always done near the camera’s widest setting. It might be more important for you to find a digital camera with a 28mm lens at the low end of the zoom range than to invest in a model that can capture pictures of Jupiter on a clear night.

Don’t be misled by a camera’s digital zoom, either. A digital zoom enlarges the scene not through optical magnification, but simply by cropping a portion of the image and enlarging the pixels. It’s no different than if you doubled the size of a picture in your image editing program—the result will be an ugly, pixelish mess. Our advice: ignore any specifications that draw attention to the digital zoom. Canon’s Power Shot G3,

for instance, boasts a 14X zoom, but that’s what you get when you combine the 4X optical and 3.6X digital zooms. In fact, we suggest that you never use the digital zoom at all. You can get the same—and often better—effect on your PC with an image editing program.

4 Exposure Exposed!

Digital cameras have more in common with inexpensive point-and-shoot 35mm cameras than big, beefy SLRs. As a result, all digital cameras offer fully automatic exposure systems that are as easy as point and click. That’s fine most of the time for most people, but if you take your photography seriously, you might want more exposure control.

The most common step up from automatic exposure is the addition of shutter- and aperture-priority modes. Familiar to SLR users, these controls let you select a shutter speed, for instance, while the camera finds a complementary aperture setting. You use these modes to do things like ensure that you freeze the action, create motion blur, or blur the background to draw attention to the subject.

Another option: some cameras feature a slew of programmed auto-exposure modes intended for specific conditions, like beach scenes, night photography, or action. And for folks who want the ultimate control, some digital cameras let you switch into full manual. Want to take a picture of the New York skyline at night? You’ll get the best results if you switch to manual and experiment with a variety of shutter speeds.

5 The Essentials Vs. the Gimmicks

Never choose a digital camera based on its special features. That’s like choosing a car based on whether it includes a sunroof, instead of making sure it’s

Accessories You Need!

Ready to go camera shopping? Don’t forget to pick up these essential accessories while you’re at the store.

- **More memory** Your camera will probably come with an 8MB or 16MB memory card, enough to store just a handful of images. Be sure to grab a 64MB or 128MB card so you can point and shoot with impunity. Incidentally, it’s usually cheaper to buy several moderately sized cards than a single massive memory card.

- **Memory card reader** A desktop memory-card reader—which lets you insert memory cards as if they were floppies in a floppy drive—is a lot more convenient than hooking up some infernal USB cable every time you want to transfer images to the PC. Dazzle’s 6-in-1 Reader (www.dazzle.com) costs under \$50 and can handle every common kind of memory card. That’s great if you have several portable devices.

- **Extra batteries** Pick up a spare set of rechargeable batteries and a charger (if one didn’t come with the camera). That way, you can keep a charged set of spares in your camera bag all the time. Speaking of batteries, keep in mind that cameras that use non-standard Lithium cells can leave you in a pinch if you run out of charge, since you can’t just pop into a drugstore to pick up a replacement battery. We like the added flexibility offered by cameras that use regular AAs, since they’re a lot easier to swap out if they die unexpectedly.

- **A tripod** Even a lightweight tripod can be a lifesaver if you want to take photos at night. Starting around sunset, your shutter speed will drop into “slow as molasses” territory, so there’s no way to get a sharp picture without some sort of support. You can get a cheap one for as little as \$25 at any camera shop.

- **Inkjet printer** Want to print what you see on the screen? We love Epson and Canon’s photo-quality inkjet printers. The Epson Stylus Photo 820 makes outstanding prints for under \$100; the Canon S9000 is a \$450 model that lets you go wide, with prints as large as 13x19 inches.



Be sure to pick up some spare memory cards so the shooting isn't over when your primary card fills up.

minute-long clips or less (because movies consume a lot more storage space than photos), and not all cameras capture sound along with the video.

Does the camera come with image-editing or panorama-making software?

Those are worthwhile bonuses, but you might not like what's in the box when comparing those applications to more mainstream programs like Adobe PhotoShop Elements or Jasc Paint Shop Pro. Software can be replaced; you're stuck with the camera.

Likewise, you might appreciate getting goodies like a battery charger (assuming your camera employs traditional AA cells) and remote control right in the box. The charger is cool, but you can buy your own for about \$20. And while you might like the idea of using a remote control to operate your camera (common applications: self-portraits and

time-lapse photography), ask yourself if you're likely to really ever use it.

Those are all nice additions, but some features are absolutely essential. For instance, insist on both LCD and optical viewfinders. The LCD screen is good for reviewing your pictures after you've taken them, but you'll find yourself using the optical viewfinder 90% of the time when taking pictures, especially outdoors where the sun can wash out the LCD screen.

Another essential: removable memory. You'll want to be able to switch memory cards in the middle of a shooting session, something you can't do if your inexpensive camera includes only integrated memory. Exactly which kind of memory card your camera uses isn't terribly important, but we'd suggest trying to stick with SD or CompactFlash. xD cards, found mostly in Olympus and Fuji cameras, are new and may not catch on. Sony's Memory Sticks are typically more expensive than other media, and with the shift to the new Memory Stick Pro media, there are capacity and compatibility issues that don't affect other media. ♦

comfortable to drive and has enough power to get up hills. But once you narrow the field to a handful of suitable models, it might be time to check out the cool features.

Some digital cameras capture video, for instance, and that can be great for moments when a still photo just isn't enough. But those videos are pretty low-resolution, so don't plan to copy one to DVD. Some cameras limit you to

A Match Made in Heaven

You might not think that your PDA and digital camera have much in common, but the truth is that the two can work quite well together. Picture this: You take the memory card out of your camera, insert it into your handheld, and immediately have the ability to view your images on a bigger screen, set up an automatic slideshow of your favorites, and generally pester friends and family with your digital pics no matter where you go. That's the magic of removable memory cards.

Not all digital camera/PDA combos are up to the task, though. If you like the idea of storing and displaying your digital images on your PDA, it's important to choose a

digital camera that uses the same memory card format as your PDA: Memory Stick if you have a Sony Clié; SD if you're using most Palms; or Compact Flash or SD with many Pocket PCs.

Most PDAs can automatically locate and display images anywhere on a memory card, so you can just move the card from one device to the other and you're in business. We were able to take the Memory Stick from a Sony CyberShot DSC-P2 and insert it into a Clié NX70V, for instance, and we were looking at pictures moments later. We could do the same with a Dell Axim and a Canon PowerShot S230, or a Tungsten T and a Kyocera Finecam S4.



Many PDAs come with image viewers built in. If yours doesn't—or if you want to upgrade to better software—there

are many options. Some of our favorites include SplashPhoto (www.splashdata.com) and Acid Image (www.red-mercury.com) for Palm OS devices, and Resco Picture Viewer (www.resco-net.com) on the Pocket PC. All of these programs are available for less than \$20.

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GPS Cheat Sheet

Channels Refers to the maximum number of satellites your GPS system can track. Modern GPS systems are typically 12-channel units.

Differential GPS (DGPS) A system that increases the accuracy of GPS, sometimes to within inches. It requires special equipment and the use of a ground-based component, so it works only in select locations.

National Marine Electronics Association (NMEA) A standards organization that has specified a typical way to format GPS data. NMEA-compatible GPS receivers can typically work with a wide variety of NMEA-compliant mapping programs on a PDA or notebook PC.

Position GPS receivers can display your position in terms of latitude, longitude, and altitude. Most receivers also display your position on a moving map display, so you can see where you're going with respect to roads and other local points of interest.

Position Dilution of Precision (PDOP) A measure of how inaccurate your navigation data is because the satellites in view aren't positioned in the sky for optimum triangulation. Many GPS receivers report the PDOP on a status screen.

Waypoints Intermediate positions on a map you use for navigation. You might want to make three stops enroute to your final destination, for instance; a GPS receiver considers these to be waypoints.

Wide Area Augmentation Service (WAAS) A special version of DGPS developed by the FAA for use in aviation.



GPS technology
puts anywhere,
anytime navigation
in your pocket

by Dave Johnson

Not Your Father's Sputnik

Along with the Hum Vee and Patriot missile batteries, it was one of the stars of the Gulf War. By the end of 1992, anyone who watched CNN had at least heard of the Global Positioning System (GPS for short). A decade later, it's almost a household word—but not because of its military applications. Indeed, GPS technology wasn't born to banish Saddam; it was conceived in the 1970s as a way to deliver precision navigation data to U.S. military forces and weapon systems from space. And while it still serves important military roles, the GPS of the 21st century is best known for its civilian use. Every day, millions of people rely on it for driving, flying, hiking, surveying, and other navigation-oriented tasks.

So, what exactly is GPS? Technically speaking, it's a navigation system based on a constellation of 24 Earth-orbiting satellites, which are distributed around the globe in six overlapping orbital planes. At an altitude of 11,000 miles, each satellite orbits the planet exactly twice each day in an extremely predictable pattern. No matter where you are on Earth, if you can see the sky, at least a few GPS satellites are somewhere overhead.

But the satellites themselves don't actually tell you where you are. Each one is equipped with a highly accurate atomic clock and broadcasts its position and the time on a continuous basis. Any GPS receiver—including the simple pocket-sized gadgets that are available in stores for as little as \$100—simply triangulates its position on the earth by comparing the signals it receives from three or more satellites.

Consumer- and business-minded GPS receivers have become incredibly popular in recent years, due in no small part to the military's disabling of Selective Availability—a feature intended to degrade the accuracy of the system for non-government users in time of war. You can now find GPS receivers in PDAs, laptops, cars, and mobile phones. There are rugged models for outdoorsy types and special units designed for aircraft and boats. And just about any handheld PC can be outfitted with a third-party GPS receiver for real-time, street-level mapping and location tracking.

GPS is both free and truly global. In this section, you'll learn more about the technology and read reviews of some of the hottest new GPS systems. ♦



PDA's You'd Be Lost Without

by Steve Hagan,
Navigation Technologies

Many of us rely heavily on our handhelds for keeping track of appointments, contacts, e-mail and a bevy of other applications. The more than 15 million personal digital assistants sold in 2002 (estimated) is evidence that the address and date books have embarked on their journey to extinction. The PDA manufacturers responsible for this evolution have increased power, capacity and connectivity so much so that the latest crop of handhelds perform better than the notebook computers of the mid 1990's.

Several applications and accessories have emerged in the past few years that have the ability to turn this essential organizational tool into a portable navigation system. Applications range from the simple road network map that never needs folding to a sophisticated turn-by-turn route guidance system with performance that rivals that of luxury car navigation systems.

The De-facto Aftermarket Navigation System

The aftermarket in-vehicle/in-dash navigation system is virtually non-existent in the US today. This is largely due to the sharp decline in the independent retailer network needed to effectively sell and install these sophisticated systems. The "big box" consumer electronics retailers have neither the personnel nor the time

required to complete the typical installation. Another major factor affecting the adoption of navigation systems at retail is the cost of the units themselves. Depending on the system, consumers could pay between \$1,500 and \$3,000 for the hardware alone. The hardware cost is also a consideration for the automotive industry in determining the line-up of cars that will offer navigation as an option and those that will not. Consequently, the majority of nav-equipped cars, trucks and SUVs fall into the luxury vehicle category.

So what is a Hyundai owner to do? Well, for less than \$250 one can turn their PDA into a powerful navigation system complete with a GPS receiver, navigation software and the critical map data needed to safely and legally route them door to door. Like most consumer electronics products, the PDA has increased in performance and decreased in price dramatically over the past few years. New handheld products from Dell, HP and Viewsonic compete for the value conscious customer at the \$299 price point making it possible for consumers to purchase a high powered PDA with navigation bundle for less than \$600.

Another overlooked benefit of PDA navigation is that it is portable. Multi vehicle households can transfer the navigation system from one vehicle to another. Portability also means that the

same unit that guided your car to the parking garage can also guide you on foot to the restaurant or the theater a few blocks away. Try doing that with an in dash system.

Connectivity

A bevy of navigation bundles are available that take advantage of the connectivity options that the PDA manufacturers offer. Compact Flash GPS receivers are available for PDA models that offer CF expansion slots while other solutions, like Navman's GPS 3640 for the iPaq, incorporate the GPS receiver into a custom sleeve that fits this Pocket PC like a glove. There's even a CF slot built into the sleeve for additional map storage.

PDA's with Bluetooth connectivity can communicate wirelessly Bluetooth GPS receivers. These recently introduced devices, about the size of a thick credit card, can be placed in the back window of your car or in your shirt pocket and seamlessly update the end user's position without wires. Since these devices are powered by a rechargeable Lithium Ion battery, you don't even need a power cord.

Convergence

Multi function handhelds that provide personal information management functionality along with wireless connectivity are increasing in popularity. The Federal Communications

Commission E911 mandate stipulates that wireless handset manufacturers and wireless carriers provide location detection for locating an individual in the event of an emergency. While the location specification required to conform to the FCC mandate isn't accurate enough for navigation, many service providers and hardware suppliers are "supersizing" their networks and hardware to exceed the FCC spec. Going that extra mile will make true "location based services" applications a reality and provide the carrier with a means of recouping their location enabling investment by charging subscribers for these value added services. These will include services like the person-locating "Friend Finder;" proximity searches for restaurants and other points of interest; driving directions; and turn-by-turn, voice prompted navigation.

As the location enabled handset market grows, the cost of the GPS chipsets that are being built into them will likely decrease, making a location-enabled PDA a viable step up in functionality without a large step up in price. Last month Garmin announced their IQue 3600 Palm OS PDA with a built in GPS receiver and navigation application. The manufacturer's suggested retail price for this "pre-bundled" device is just \$589.

Navigation Solutions for the Enterprise

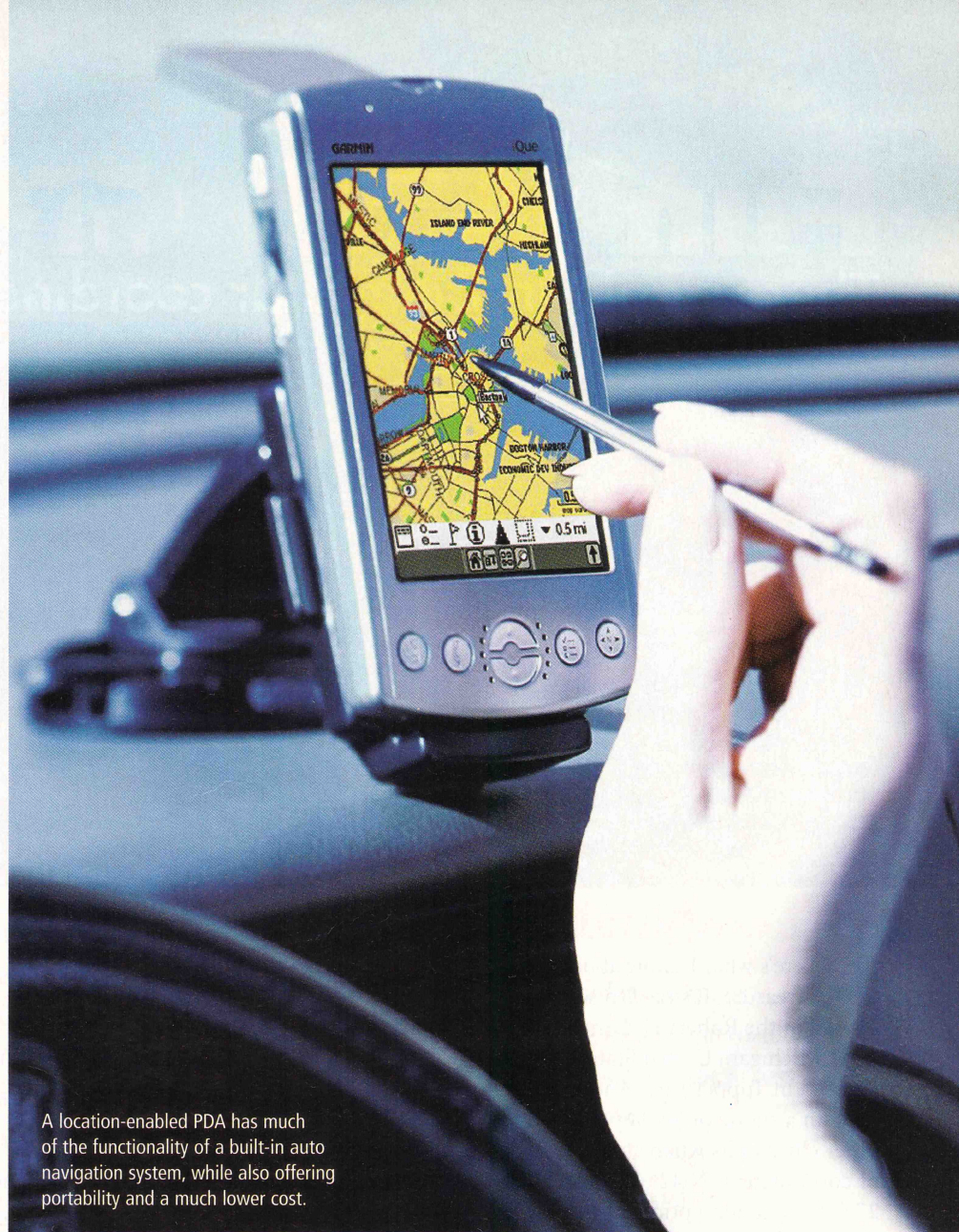
A Forrester Research survey of 874 executives of N. American companies indicated that the majority of those responding have integrated or are planning to integrate the PDA as a tool for facilitating their business. Many of these industries involve field sales and service personnel that spend much of their time driving from location to location. Incorporating location sensing and navigation into these devices could be extremely valuable to the enterprise by reducing drive times to customer

appointments, optimizing routes to multiple destinations, delivering critical customer information to field personnel based on their location, and relaying location relevant information to the enterprise back end.

Imagine a mobile professional having the ability to integrate their Outlook Contacts into a navigation application so that customer addresses are geocoded into the map database. Imagine an appointment Calendar that alerts the mobile professional to scheduling conflicts based on travel times from one appointment to the next. Or a PDA

that would advise a commuter to leave 20 minutes earlier to route them around a traffic incident. Consider a handheld device that can deliver a detailed report of the end user's appointments, appointment duration, travel times and mileage calculation. These applications are in development now.

As the vehicle navigation market matures and the car manufacturers begin the navigation migration from luxury class to middle tier, in dash systems will become more affordable for the masses. Until then, plug in your PDA and enjoy the ride. ♦



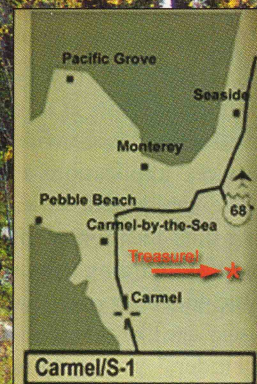
A location-enabled PDA has much of the functionality of a built-in auto navigation system, while also offering portability and a much lower cost.

Fun With GPS

There's gold in them thar coordinates!

by Rick Broida

"Go left at the split branch,
then 10 paces straight
ahead to the big rock..."



Here's what I know about the treasure. It's hidden somewhere in the Robert H. Long Nature Park, Michigan, United States. It's encased in Tupperware. And it may contain a statue of Scooby Doo. My only other clues to its whereabouts are a set of coordinates—N 42° 31.870 W 083° 27.038—and a cryptic hint that starts like this: "Fgnl ba gur cngu." My one and only tool for finding the treasure: a Magellan SporTrak Map GPS.

This is Geocaching, an engaging new pastime that turns GPS receivers into high-tech treasure maps. You're given a latitude and longitude—coordinates you zero in on with your GPS—and charged with finding the hidden booty—the "cache." It costs nothing to play (except for the GPS hardware, which you can buy for as little as \$100), and there seems to be no shortage of caches—all of them created and hidden by other Geocaching enthusiasts—to keep you busy. We found no fewer than 50 within a 15-mile radius of our metro-Detroit office.

Ground N 0° W 0° for all things Geocaching is *geocaching.com*, where you'll find detailed instructions on getting started, a Geocache search engine (which lets you filter by state, country, or Zip code), a message forum, and information on what kind of gear to buy (any GPS will do, really). You can also set up a personal account to keep track of caches you've found and receive notifications of new ones in your area.

As you might expect, the goal of Geocaching is neither riches nor thievery. A cache is usually a box, tin, or some other container filled with one or more bits of "treasure": a spool of thread, a tennis ball, a Smurf doll, and so on. You can take something from the cache, but only if you leave a different item behind. Taking the whole cache just isn't done, as it kills the spirit of the game and leaves nothing for the next Geocacher. You're also likely to find a notebook inside the cache, where you can record your name for posterity.

So, just how hard is the sport of geeks? Your GPS should steer you to the exact spot, right? Wrong—latitude and longitude coordinates are precise down to about 15 feet, and GPS receivers can be off by dozens more. As the Geocaching site puts it, "It's the last mile that'll get you every time." Imagine standing in the middle of some woods trying to find, say, an ammo tin that could be three feet away or 30—or 300. Most caches listed on the site have additional clues you can decipher if you need extra help.

Still doesn't sound tough enough? If you have an afternoon to kill, try a "multicache," a hunt comprising two or more caches. The first provides coordinates to the second, the second has hints to the third, and so on. After that, get ready for virtual caches, event caches, Webcam caches, and other variations on the theme. Before you set off on any Geocaching expedition, be sure to read *geocaching.com*'s first-timer tutorial; it's replete with helpful information and safety tips. ♦

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BusinessWeek

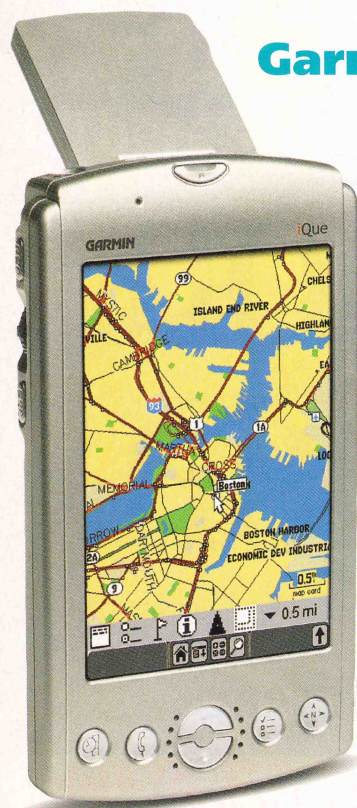


THE EXPERTS' CHOICE FOR IN-VEHICLE NAVIGATION



Reviews

2km



Garmin iQue 3600

A Palm OS handheld that rivals Sony's best? From Garmin? You read right: the GPS people have engineered one of the most compelling new PDAs since the Clie NX70. Not only does the iQue 3600 sport a 320x480-pixel color screen, an MP3 player, and Palm OS 5, it also marks the arrival of the first GPS-equipped handheld. No bulky plug-in modules, no messy cables, just full-color GPS goodness, complete with street-level mapping, voice-prompted driving

Garmin's new iQue 3600 is a feature-packed, high-end PDA with integrated GPS—a dream come true for folks who get lost a lot.

directions, and more. We come not to review the just-announced iQue—we'll save that for a later issue—but to whet your appetite.

Start with this: although Palm OS 5 limits internal memory to 16MB, Garmin "patched" the operating system to allow for 32MB—a first for any Palm Powered PDA. An SDIO card slot allows you to install additional apps, data, and regional maps for turn-by-turn navigation.

The small GPS antenna tucks neatly into the rear of the unit—flip it up to activate GPS mode and start tracking satellites. The iQue comes with a batch of navigation applications, and Garmin has made the core Palm OS apps

GPS-aware, so you can easily navigate to an address stored in your contact list. The maps can show local points of interest and automatically recalculate your route when you go off course.

Only time will tell if the iQue lives up to its promise, but we suspect it might be the perfect PDA for people who want the large screen and virtual Graffiti area offered by the Clie, but prefer GPS positioning to an integrated digital camera.

—Dave Johnson

Garmin
www.garmin.com
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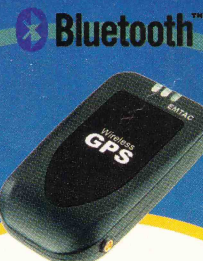
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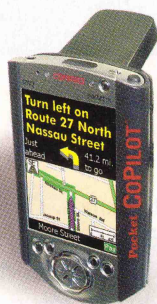
Bluetooth GPS
EMTAC Bluetooth GPS allows you to receive GPS data wirelessly. For use with any bluetooth enabled device including PDAs and Laptops. Available with Palm OS navigation software or without software.



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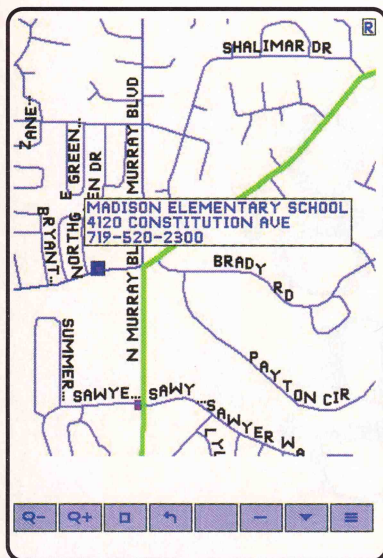
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THE EXPERTS' CHOICE FOR IN-VEHICLE NAVIGATION



Mapopolis Holux GPS Bundle for Sony Clié



Mapopolis has a sharp, easy-to-read map mode, but driving instructions are static and displayed on a separate screen, sans map.

Mapopolis offers a “GPS Bundle”—a receiver, the appropriate connection cable, and car power adapter—for a variety of PDAs, including the Palm, Sony Clié, and various Pocket PCs. That’s great, since there are few other options for getting GPS on your Sony Clié.

The receiver itself is a “puck” style unit with a strong magnetic base, manufactured by Holux, and tethers to the Clié’s serial port via a six-foot cable. As for software, the system relies on Mapopolis’ own viewer and a family of maps that vary by price and features. The Platinum Plus maps, for instance, cost \$13 each

or \$45 for a subscription. Basic maps, which cost \$3.95 each, lack such Platinum Plus extras as driving directions and local landmarks. Installation is Web-based; you can download maps by city or an entire state at once (file size varies from a few hundred kilobytes to about 10MB).

No matter what option you choose, though, the Palm OS version of Mapopolis doesn’t provide real-time driving directions or on-the-fly routing. You can create a route between two points and see the path highlighted on the PDA screen or generate a static list of directions, but the software never advises you about upcoming turns.

Instead, you simply track your position on the map. As a result, Mapopolis is simply not a very useful navigation tool for the driver.

On the other hand, Mapopolis is fun to use as a mapping app since it supports the full 320x480-pixel screen if you’re using an NR, NX, or NZ-model Clié. It’s just a shame that Mapopolis doesn’t interactively guide you to your destination.

—Dave Johnson

Mapopolis
www.mapopolis.com
\$174.99

B-



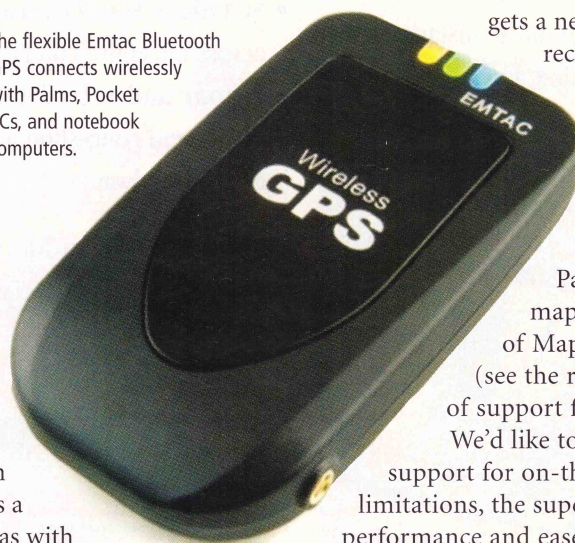
Emtac Bluetooth GPS Palm OS Bundle

The Emtac Crux II Bluetooth GPS is an amazingly logical and flexible design. Smaller than the tiniest of cell phones, it easily sits on a car dashboard in view of satellites. It connects wirelessly, so there are no cables strewn about your car, and it will work with any Bluetooth-equipped computing device (Palm, Pocket PC, or notebook computer) running an NMEA-compatible mapping program.

We tested the Emtac bundle offered by Mapopolis, using a Palm Tungsten T. Pairing the devices was a snap, and operation was as simple as with a wired GPS. Identical hardware is available for Pocket PC use from Socket Communications, priced at \$399.

The Emtac GPS is amazingly fast at getting a satellite fix; minutes. And it’s even faster at reacquiring satellites if its view is briefly blocked by a tunnel or other obstruction—it typically

The flexible Emtac Bluetooth GPS connects wirelessly with Palms, Pocket PCs, and notebook computers.



gets a new lock in a matter of seconds. The rechargeable battery is good for more than six hours of continuous use; much longer if you just do sporadic position checks. Still, we wish a car charger was included.

The included Mapopolis application offers extremely fast (particularly on Palm OS 5) directions, and sharp, clear maps. Unfortunately, the Palm OS version of Mapopolis suffers a number of limitations (see the review above for details), including lack of support for real-time turn-by-turn directions.

We’d like to see Mapopolis beefed up with better support for on-the-fly navigation. Despite the software’s limitations, the superb performance and ease of connection of the Emtac GPS makes it our favorite GPS hardware so far.

—Denny Atkin

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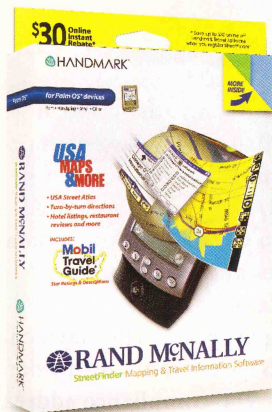
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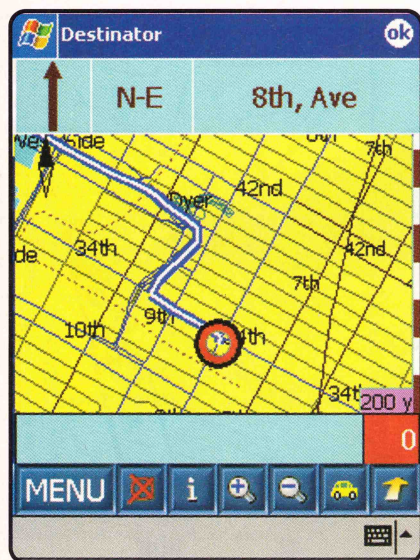
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Destinator



Destinator offers a unique 3D view of your travels.

Available as a stand-alone product or bundled with a GPS receiver, Destinator is a full-featured, easy-to-use navigation package for the Pocket PC.

You can choose your destination from a menu, or by accessing an address in the Contacts application. As you travel, Destinator provides clear, loud voice directions. Particularly nice is the program's ability to warn you ahead of time should two consecutive turns follow in rapid succession. (If only my

spouse had that feature.) Deviate from the plotted route and Destinator will recalculate directions to get you back on track.

Map data is included not only for the United States, but Canada as well—a rare bonus. With two CDs, Destinator offers detailed street maps for large and small cities alike. (In some areas such as Vermont, though, the data is a few years out of date.) All maps are kept below 64MB to better fit on expansion cards, but you should plan on a 128MB or larger card if your travels often take you across map borders. The detailed list of “points of interest,” such as restaurants and airports, is a lifesaver when you're desperate to find the nearest gas station.

The Leadtek GPS sleeve included with PowerLOC's bundle for the iPAQ 3800/3900 was an excellent performer, with quick satellite acquisition. The software worked well with the Navman 3420, but the Bluetooth Browser locked up when trying to connect to the Emtac Bluetooth GPS.

Although there are other routing programs with more features, few can match Destinator's ease of use. It's an excellent choice when you just want to get there.

—Denny Atkin

PowerLOC

www.destinator1.com
\$329 (hardware),
\$249 (software only)

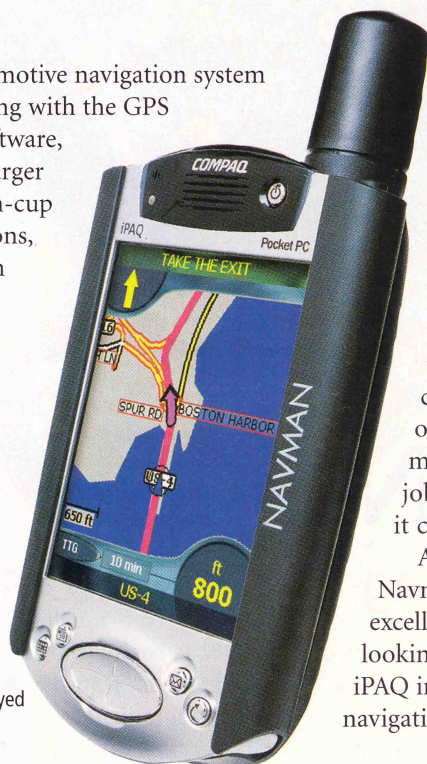
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Navman 3420

Navman's 3420 is a complete automotive navigation system for the iPAQ 3600 and higher. Along with the GPS sleeve and SmartST navigation software, the package also includes a car charger and a surprisingly effective suction-cup mount. With voice-guided directions, it gives expensive in-car navigation systems a run for the money.

The GPS sleeve boasts a CompactFlash Type II slot, handy given the large size of GPS maps. We were able to use a 1GB IBM Microdrive in the sleeve, offering room for dozens of maps. Although the sleeve is only advertised as working with iPAQs up to the 3900 series, we had no problems using it with an iPAQ



Turn-by-turn directions are displayed with large, helpful arrows, but stick to the voice when driving.

5450. The first time we tried to use the sleeve, it took so long to get a lock that the iPAQ went into sleep mode. After the initial fix was achieved, subsequent “cold starts” took one to two minutes.

The Navman 3240's two CDs include only data for the 48 contiguous states and Hawaii. Should you need to navigate in Canada or Alaska, you'll need to buy a third-party mapping program. The Navtech maps included with SmartST were more up-to-date than Destinator's, reflecting 911-compliance address changes made in Vermont in 1998. Numerous points of interest are included, from hotels and hospitals to mom-and-pop restaurants. The package does a superb job of plotting both “fastest” and “quickest” routes, and it can quickly adjust if you leave the planned route.

At under \$300, the Navman 3420 is an excellent deal for those looking to turn their iPAQ into an in-car navigation system.

—Denny Atkin

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For complete details and dealer locations, visit www.socketcom.com/gps.
And see why Socket GPS Navigation is putting Bluetooth on the map.

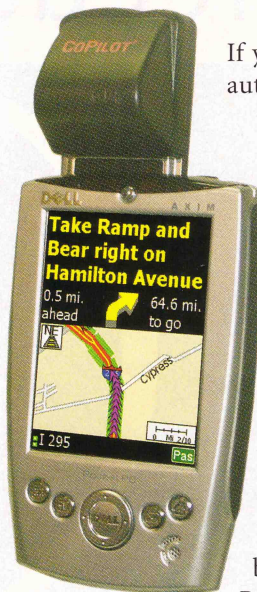


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The Mobile Connection

Pocket CoPilot 3.0 Dell Axim Edition

TravRoute's Pocket CoPilot software is an established and respected navigation tool for laptops and several models of PDA, and TravRoute didn't waste a minute releasing a version for the Dell Axim.

The Axim Edition combines TravRoute's desktop CoPilot software with Pocket PC CoPilot client and a CompactFlash-based GPS antenna. The software is what sells this little package; it's superb. You can copy huge swatches of the US to your Pocket PC, complete with street-level data and local points of interest. You'll want to use an SD card; together, Colorado and New Mexico consumed about 40MB on our Axim. You can program the Axim to navigate to any street address or intersection, complete with turn-by-turn directions. You can see just directions or split the screen and also see a bird's eye view map as well.



The GPS antenna uses the CompactFlash slot, but you can store maps and data in the Axim's SD slot

If you miss a turn, the Pocket PC finds a new route automatically.

The antenna is sizable—it adds about 2.5 inches to the top of your PDA. The package includes a car power adapter for your Pocket PC and a mounting kit that lets you attach the Axim to air vents on your car.

CoPilot got us where we were going with uncanny accuracy, but the system isn't perfect. Whenever we reset the destination, it had the devil of a time reacquiring satellites. Eventually, we found that it was faster to reset the Axim; the system would then lock onto satellites pretty quickly.

More frustrating: CoPilot is incredibly sluggish. The program takes about 15 to 30 seconds to start, and switching modes is lethargic. The audible turn instructions sound like Charlie Brown's teacher talking through a fast food drive-through window speaker. That's okay, though, because the easy-to-read turn instructions are a joy to use.

Pocket CoPilot 3.0 Dell Axim Edition may not be perfect, but it's still one of the best GPS systems on the market. It can navigate for us any day.

—Dave Johnson

TravRoute
www.travroute.com
\$299

B



Meridian Color



A rugged stand-alone GPS, the Meridian Color can also connect to your PDA and laptop.

One often-overlooked option for adding GPS capabilities to your PDA is purchasing a stand-alone, handheld GPS. With a serial cable and the proper PDA adapter, you can connect any NMEA-compatible GPS to your handheld and use it with PDA GPS software. Although handheld GPS units are larger than PDA models, they have the advantage of working without the PDA—great for situations such as hiking or boating where you don't want to risk your \$500 handheld.

Magellan's Meridian Color is the premiere handheld GPS. Boasting a 160x120-pixel color screen, a 16MB map database, and an SD card slot

for adding additional maps, this GPS boasts a sturdy, waterproof case that will float if dropped in water. Try that with your iPAQ.

The 16MB map database includes major roads and landmarks, but to take full advantage of the stand-alone GPS you'll want to add Magellan's MapSend software, which can download detailed street-level or topographic maps to the Meridian. The GPS stores up 500 waypoints, 2000 track points, and 20 reversible routes that let you find your way back to a specific location.

Connect the GPS to your PDA using the included serial cable and an adapter (www.thesupplynet.com offers GPS cables for virtually all

PDA) and it will work with all NMEA-complaint mapping programs, such as Mapopolis, Destinator, and Pocket Streets.

The Meridian Color is a pricey solution, but if you'll primarily use a GPS as a PDA companion and only occasionally on its own, consider one of Magellan's monochrome GPS receivers, which start at under \$200. While more limited in stand-alone mode, they'll function almost identically when tethered to a PDA.

—Denny Atkin

Magellan
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- PC Magazine

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- Handheld PC Magazine

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- Mobile Computing & Communications

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"...TeleType GPS became my dream guidance machine... and provides a wealth of information in a well-organized manner."

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"TeleType has always had great mapping software... The screen displays more information than any of the other GPS software I tested."

- Pocket PC Magazine

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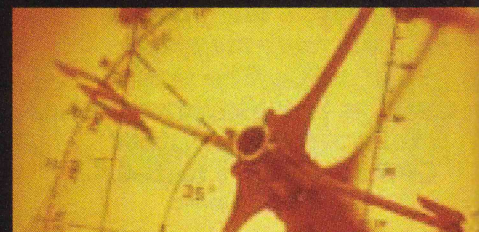
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Sound Judgment

"Hey, look over there!" You'd be amazed how many unsuspecting exhibitors at this year's Consumer Electronics Show fell for that, which is how we managed to snag these sweet new MP3 players.

By Rick Broida

MP3 Cheat-Sheet

MP3 A kind of compression technology (MPEG audio layer 3) that has become universally popular for sharing, downloading, and transporting songs.

WMA A Microsoft-pioneered MP3 alternative that offers CD-quality music from files that require roughly half the space of equivalent MP3s.

Flash Memory Also known as solid-state memory, Flash memory is like a hard drive with no moving parts. Flash memory is what's already inside an MP3 player—usually 64MB or 128MB—and what's used by removable memory cards.

MMC MultiMediaCard, a postage stamp-size memory card used in mobile devices like cameras and audio players. Maximum capacity: 128MB.

SD Secure Digital, the heir apparent to MMC, is physically almost identical. Maximum capacity (so far): 1GB.



Archos Jukebox FM Recorder 20

The original Jukebox Recorder was among the first hard drive-based audio players that could record from external sources. The Jukebox FM Recorder 20 ups the ante with a built-in FM radio, FM recording, and a USB 2.0 interface. It also gives Apple's \$499 iPod a run for the money, offering 20GB of storage for \$289.95.

In most respects, the Jukebox FM copies its predecessor. It offers voice and line-in recording (cable included), sweet-sounding folding neckphones, and a neoprene carrying case. Also unchanged are the interface and controls, which are simply organized but occasionally confusing (the Stop button, for instance, also serves as a "back" button, but it's not labeled as such). Among the Jukebox FM's extra perks are "retro-record," which nabs the previous 30 seconds of a song; on-device intro/outro editing for radio recordings; and 30 FM presets.

Unfortunately, Archos has yet to address a crucial shortcoming with shuffle-play mode: no support for subfolders. Most music collections are organized into folders based on artist, genre, etc., but the Jukebox FM can play randomly only within a single folder. This defies the very definition of "jukebox." Someone smack the programmer behind that blunder.

Admittedly, some reorganization of your songs can overcome this issue, leaving you with an otherwise excellent audio player that's also an unbeatable value.

Archos Technology

www.archos.com

\$289.95

B+



Digital Innovations Neuros HD 20

The Neuros HD stands alone among MP3 players. It can broadcast your song library to any FM radio, making it a perfect companion for cars and home stereos. It can identify songs you hear on the radio (take that, tight-lipped DJs!). And its versatile "backpack" architecture allows for easy upgrades—just in case you can't make do with 20GB.

The amenities don't end there. The Neuros has five preset buttons that take you to favorite songs, radio stations, playlists, or whatever. It records voice notes, radio programs, and audio piped in from any outside source. It lets you manage songs and playlists directly, synchronizing changes with your PC when connected. In short, it's one brainy audio player.

We tested a beta version that performed well (save for buggy desktop software) and sounded, well, amazing. No joke—our iPod is going back in the box. Just one gripe: the painfully slow USB 1.1 interface. It took nearly three hours to transfer 1,200 songs—a mere quarter of what the player can hold. Digital Innovations promises a USB 2.0 version in the near future—and a fair upgrade path for early adopters.

With unparalleled features and fidelity, the Neuros HD 20 reigns supreme among audio players in its class. Scratch that—it's in a class by itself.

Digital Innovations

www.neurosaudio.com

\$399

A-



Creative TravelSound MP3

Music was meant to be shared—and we're not talking about illegal downloads from KaZaa, cheapskate. No, we mean shared with everyone in the room, which explains the design of Creative's TravelSound MP3. It comes with speakers, not headphones, so you can turn your office, dorm room, or wherever into a teeny little dance hall.

However, this innovative desktop stereo has a design that's strictly 20th-century. For starters, it's equipped with only 32MB of memory—enough for about 30 minutes of MP3 audio (or an hour of WMA, which it also supports). There's a memory slot, but only for trespassé SmartMedia cards. And there's no LCD for viewing song info or even track number.

The little boombox does have a practical side: it doubles as a voice recorder, capable of storing two hours' worth of meetings, lectures, and so on. You can also plug in an external MP3 or CD player and use the TravelSound as portable speakers. Power comes from an AC adapter (included) or four AAA batteries.

For such a small device, the TravelSound cranks out admirably loud audio. Bass response is understandably weak, but the overall audio quality was better than we expected. Shortcomings aside, it's nice to have around in an office, dorm room, or hotel suite.

Creative

www.creative.com

\$129.99

C+



Idea WF-200

Some ideas are so obvious, you just want to smack yourself for not thinking of them first. Witness Idea's unabashedly brilliant WF-200, which packs an MP3 player into a pair of comfy, neckband-style headphones perfect for walking, running, and other athletic endeavors. This approach vanquishes the cord that usually gets in the way when you do that stuff, thereby lending a remarkable sense of freedom. We tested the 64MB model; a 128MB version is available for \$40 more.

Understandably, the WF-200's controls are minimal: a play/stop button adorns one of the earpieces; volume and forward/reverse controls, the other. They're easy enough to manipulate by touch, but keep in mind there's no way to tell what song you're queuing up until it starts playing. There's no random-play mode, either.

We wish the bundled software, MPmaster, came with every MP3 player. It lets you find and preview MP3s, build and save playlists, and transfer songs with refreshing ease. It can even print your playlist, nice given that there's no LCD on the unit.

The WF-200 has just one real flaw: no WMA support. Any player with a fixed amount of flash memory (especially 64MB) should have it—but even so, we can't help loving this clever, well-designed piece of music wear.



iRiver iFP-180T

iRiver's Toblerone-shaped iFP-180T accommodates MP3, WMA, and ASF formats (the latter a "container" for WMA files); records voice notes; and plays FM radio. It can also record radio segments for later listening—nice if you get interrupted during, say, your favorite NPR show. For the athletically inclined, iRiver supplies a lanyard. All this, plus 128MB of storage, comes at the very reasonable price of \$139.99. All that's missing is an expansion slot.

Of course, great features alone don't make an MP3 player great. The iFP-180T looks good, sounds good, and works as advertised, but it needs some improvements in the usability department. The controls, which consist of three buttons and a joystick, seem simple enough, but they're unnecessarily confusing. For instance, to scroll down through setup menus, you move the joystick right, not down. (Down takes you to the previous screen.) And why is the play/stop button labeled "stereo?" Particularly annoying is the way song info "wipes" across the screen rather than scrolling, so you read it in awkward chunks. And when you search for songs, you're shown only track number, not the song title.

We're willing to put up with this kind of grief in exchange for a bargain price and desirable features. Fortunately, the iFP-180T delivers both.



JetAudio iAudio CW200

These days, we compare most flash-memory-based MP3 players to Bantam Interactive's BA50, a colossally feature-packed model priced at just \$80. (It was among our Best Products of 2002; see Handheld Computing issue 6.0.) JetAudio wants \$180 for its iAudio CW200 (the 128MB version—it's also available with 64MB and 256MB). Should you pay it?

At the very least, consider it. The lighter-shaped CW200 not only doubles as an FM radio and triples as a voice recorder, it can record from radio with the push of a button. It comes with a lanyard, a belt-clip carrying case, and a JetAudio-branded version of the great MPmaster software bundled with the Idea WF-200. We particularly liked the CW200's simplistic operation, attributable to its pair of jog-wheel controls and logically designed interface. You can store 12 radio presets, choose between four equalizer modes (or create your own), and even sort your music into four "album" folders—a nice alternative to playlists. The crisp, backlit LCD displays ample song and setting information. A single AAA battery provides about nine hours of play time.

Unfortunately, the CW200 lacks a memory slot and WMA support. For the price, it should have one or the other (preferably both). Thus, much as we like this player, it's just shy of excellence.

Idea
www.idea.com
\$129.99



A-

iRiver
www.iriveramerica.com
\$139.99

B

JetAudio
www.jetaudio.com
\$179.99

B+



Sonicblue Rio S50

Sonicblue's Rio division pretty much wrote the book on MP3 players, and it shows in the S50—a stylish, well-rounded, wholly affable MP3 player/FM tuner. Actually, it's affable only after you dynamite it from its blister-pack packaging—the greatest consumer nuisance since sales tax.

As all portable players should, the 128MB S50 includes an expansion slot, WMA support, and a belt-clip case. Sonicblue wisely abandoned the proprietary “backpack” modules required to expand previous Rios in favor of industry-standard MMC cards. However, had Sonicblue opted for an SD slot instead, you could add up to 1GB of storage instead of just 128MB.

Sonicblue's earbud headphones aren't the best we've heard, but overall the S50 pleases the ear. What's more, it has the smartest controls, easiest interface, and nicest screen of any almost player we've ever used. We especially like the Rio Music Manager software, which organizes your MP3s by album, artist, genre, song, and playlist. (For Mac users, Sonicblue supplies iTunes.) And how's this for a perfect power solution: If the S50's rechargeable battery (good for 20 hours, according to Sonicblue) croaks while you're on the road, you can pop in a regular old double-A alkaline.

That's a great feature, but it doesn't quite justify the S50's price. Plenty of other MP3 players offer more for less. ♦

Sonicblue

www.sonicblue.com
\$179.99

B

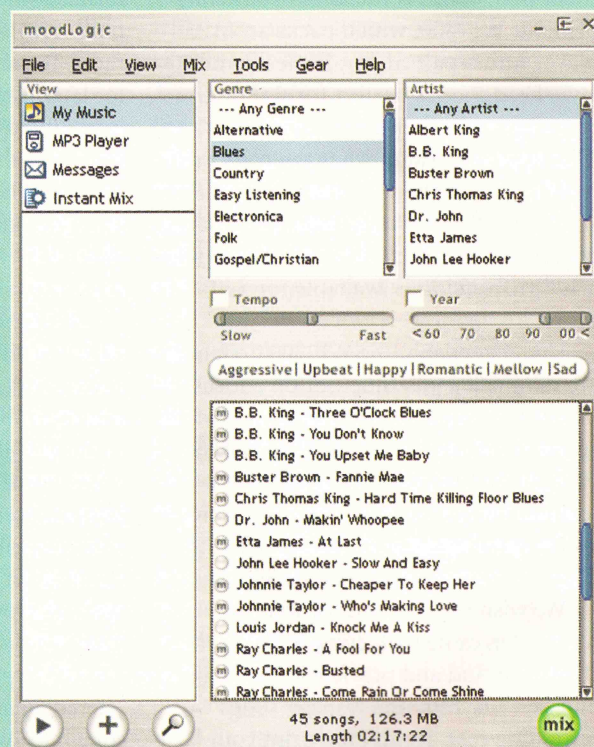
How to Tame an Unruly MP3 Collection

Unless you're the digital equivalent of a neat freak, you probably have MP3 files scattered across your hard drive. They're probably a mongrel collection of downloaded songs, ripped CDs, and maybe even a few converted LPs. Wouldn't it be great if you could organize your MP3 library, create songs mixes based on genre or even mood, and repair broken or incorrect ID3 tags—all in one fell swoop?

That's the idea behind MoodLogic (www.moodlogic.com), an innovative utility that can whip your MP3s into digital shape. Once the software identifies your songs (which it does by cross-referencing them with the online MoodLogic database), it can generate mixes based on song, genre, or artist. It can also cull songs based on tempo, year, and “mood”—everything from upbeat to romantic to sad. Once your mix is ready, MoodLogic shoots it to your regular MP3 software (Winamp, MusicMatch, etc.) for immediate play.

Pretty cool, but what really justifies the price of admission is the way MoodLogic organizes and fixes your MP3s. In about the time it takes to read this paragraph, the software will filter all your songs to a designated folder and fix their file names and ID3 tags (which contain song title, artist name, album, etc.). If you're unhappy with the result for some reason, there's even an undo option.

The \$29.95 registration fee entitles you to “activate” 10,000 songs. You can buy additional blocks of 10,000 credits for the same price. That could make MoodLogic a pricey proposition for users with massive libraries, but it's easy to justify the price if your MP3 collection seems like more of a burden than a blessing.



In the mood for love? Heavy metal? Light jazz? MoodLogic sorts your songs based on a variety of criteria.

POCKETSENSEI BUILDS THE ULTIMATE LAUNCHER

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SOFTWARE

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SILVERSCREEN III

*The Palm-Powered Launcher of Tomorrow
Takes Shape at PocketSensei.com!*





Shape Up!

**First it organized your life.
Now your PDA can extend it
by helping you get fit and trim.**

By Rick Broida

Look at you. Prostrate on the couch. Scarfing Doritos by the handful. Gawking at Anna Nicole Smith's "reality" show. Oh, wait, that's us. But unless you're the healthy-lifestyle poster child, you don't get to smirk. We're all citizens of this flabby super-size layabout nation, this junk-fed fast-food society in which thin people have become the minority. When we sit around the house, we really...okay, you get the idea.

The irony is, this is not one of those problems no one knows how to solve, like Adam Sandler movies. The health craze is decades old, and despite the steady stream of conflicting information ("Meat will kill you"/"Eat nothing but meat"), we all know the real regimen: eat less, exercise more. We need to put the chips away, break out the carrots (no dip—you know how much fat is in dip?), and hit the gym/pool/track/heavy bag. So why don't we? (We blame the rise in quality television. Are we supposed to not watch *Alias*?)

You've heard the old saying, "The right tool for the right job." The right tool in this case is your PDA, which you can use to track everything from the number of calories you take in to the number of crunches you bang out. There's a (sorry) healthy selection of diet and exercise software for Palms and Pocket PCs alike, all of it designed to help you chart, diagnose and improve your progress. Whether you're looking to drop a few pounds or just maintain that already impressive physique, keep your handheld PC at hand and get ready for action.

Step 1: Keep a Food Log

Health experts agree that the first step in identifying poor eating habits is keeping a log—a daily diary—of the foods you eat. The idea here is twofold: to give you a bit of a shock (“Wow, I really eat *that much* in a day?”), and to help you pinpoint the “problem foods.” Perhaps you don’t realize you drink five cans of soda every day, or eat fast food three times a week. Keeping a journal forces you to examine everything that goes into your gullet (and, hopefully, prepare to make changes).

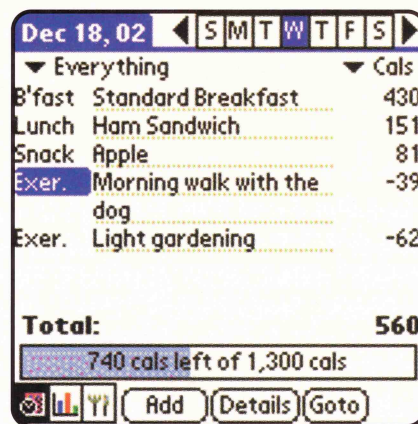
Your handheld PC makes for an ideal journal, as it’s with you most of the time and therefore easy to keep current. You can either use the built-in note/memo pad application, or pay a few bucks for an actual journal program—one that automatically assigns dates and times to each entry. A good Palm OS solution is **My Diary** (www.sandsusa.com). Pocket PC users should check out **Journal Pro** (www.dsrtech.net).

Of course, there are programs designed expressly to track your food intake, thus allowing you to count calories, manage nutrition, work toward a weight goal, and more. **CalorieKing.com Mobile Edition** (www.calorieking.com), for instance, includes a database of over 10,000 generic and brand-name foods, each with nutritional information. It’s available for Palm OS and Pocket PC handhelds.

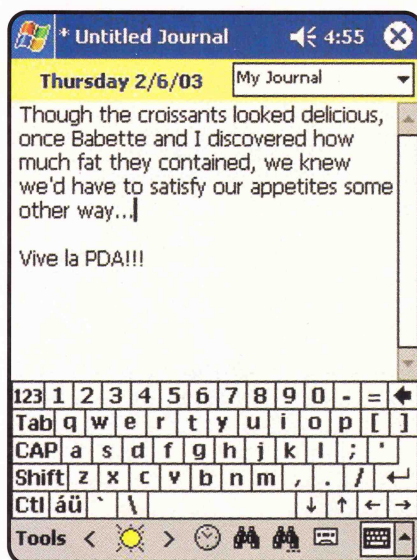
Some programs go beyond mere calorie counting. **HealtheTech BalanceLog 2.0** (www.healthetech.com) for Palm OS tracks not only calories and nutrients, but also your workouts (see the sidebar “Diary of a Chex Addict”). There’s also an optional Windows component, so you can keep your records in sync with your PC (and even the Web). Of all the health and fitness programs we’ve tried, we think this one’s the best. However, it’s on the expensive side: \$49 for the Palm OS version, \$69 for the Palm/Windows bundle. If you want something a bit



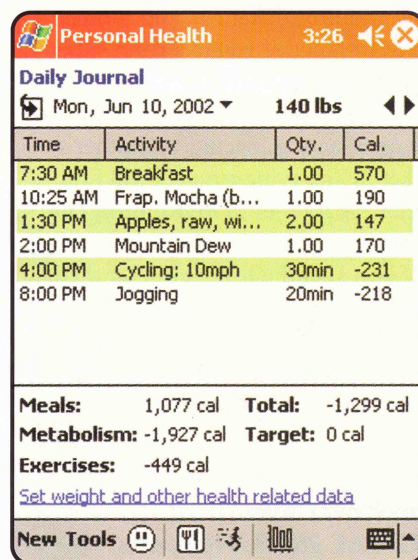
BalanceLog



CalorieKing



Journal Pro



Personal Health & Diet Manager

more affordable, yet nearly as comprehensive, try **Diet & Exercise Assistant 4.0** (www.keyoe.com). It’s \$19.95, and it’s also available for

Pocket PC. Also for Pocket PC users, **Personal Health & Diet Manager** (www.twopeaks.com) offers a complete set of diet- and exercise-tracking tools.

Get Fit the PDA Way!

Tips for using your handheld as diet and exercise assistant

Set alarms If you’re like us, one of your biggest obstacles is memory. How are you supposed to remember to drink eight glasses of water per day, or even just take that 20-minute walk on your lunch break? Simple: Set alarms in your handheld PC, and set them to recur every day. It may clutter up your appointment calendar a bit, but what’s a little clutter in exchange for a slimmer waistline?

Use a timer There are plenty of programs that turn your PDA into a stopwatch and/or countdown timer—two indispensable assets for the athletically inclined. Palm OS users need look no further than **BigClock** (www.palmgear.com), a freeware gem. A good Pocket PC equivalent is **About Time** (www.myplaymaker.com), \$19.99.

Step 2: Keep a Fitness Log

Physical fitness goes hand in hand with dietary diligence. While many of the aforementioned programs let you record exercise sessions, if you really want to keep close tabs on runs, workouts, and other athletic endeavors, you need a program built with that in mind. Such programs will not only chart your progress over time, but also help you plan your routines, schedule workout dates, monitor distances, and more.

For instance, if you're a runner, biker, or swimmer, you can use **Runner's Log** for Palm OS (www.palmgear.com) to keep tabs on distances, pacing, and other stats. Pocket PC-carrying runners will find similar capabilities in **MyRunningLog** (www.mysporttraining.com).

If you spend a lot of time at the gym (or plan to), pump up your PDA with a program like **BioBody** (www.biohazardsoftware.com) or **Pocket Workout 2.0** (www.electricdreams.ca),

Activity Log (16) ▼ Marty		
▼ Date	▼ Location	▼ Distance
3/3/00	Strongsville	4.50 miles
3/10/00	Carriage Trail	3.50 miles
3/15/00	Strongsville	4.50 miles
3/19/00	Jones Park	3.50 miles
3/21/00	Lock 29 - Nor	7 miles
3/23/00	Edgewater P...	4 miles
3/30/00	Lock 29 - Sou	6.50 miles
4/1/00	Olmsted Park	2 miles
4/2/00	Carriage Trail	3.50 miles
4/4/00	Lock 29 - Sou	6.50 miles
Summary New [Icons]		

Runner's Log

both for Pocket PC, or **Reflex** (www.xenware.com) for Palm OS. These tools track and organize your weightlifting and exercise regimens, complete with progress graphs and summaries. We also recommend **Fitness Tools** (www.craigcecil.com), a Palm OS collection of fitness calculators that measure everything from body fat to flexibility. ♦

Rick Broida loves kickboxing, elliptical exercisers, and, unfortunately, French fries.

MyRunningLog 4:06p ok

Friday, June 29, 2001

Duration: 0:41:31 H:mm:ss

Intensity: Sustained Cal: 716

Course: Danielson water tower

Distance: 3.7 mi.

Pace: 0:11:13 per mile

Heart rate: 150 (Average)

Weight: 200 lbs

Notes: Tap here to add a note

MyRunningLog

BioBody 4:41

Today

Tuesday, June 25, 2002

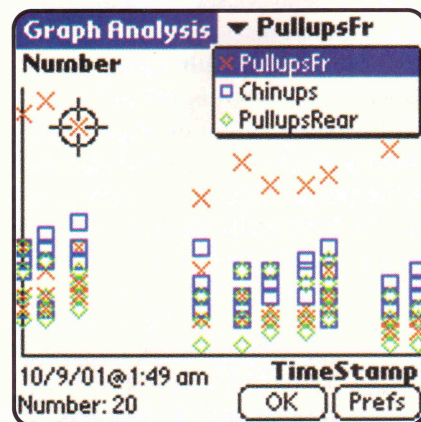
Today's workout:
Upper Body

My next meal:
Chicken, Brown Rice, Salad

My goals:
By 7-29-02:
Body weight 160
Body fat 12%
Fit into old clothes

Menu

BioBody



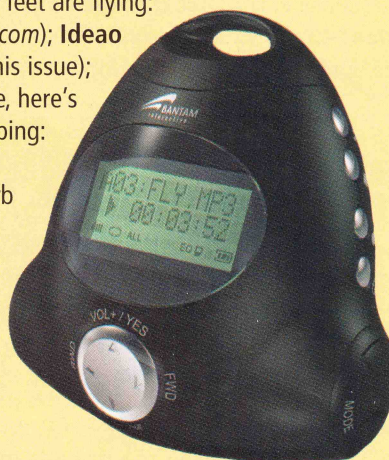
Reflex

Workout Weapons: 3 Great MP3 Players, 10 Great Songs

Let's be realistic: your run, walk or ride probably won't last much more than an hour, so you can easily get by with a Flash-memory MP3 player—one with 128MB of memory (enough to hold about 2 hours of music). These three exercise-friendly models will keep your toes tapping while your feet are flying:

Bantam Interactive BA50 (www.bantamusa.com); **Ideo WF-200** (www.ideo.com, see the review in this issue); **RCA Lyra RD1080** (www.rca.com). Meanwhile, here's a list of 10 great songs to get your heart pumping:

- *Shake Your Groove Thing*—Peaches and Herb
- *One Week*—Barenaked Ladies
- *Tubthumping*—Chumbawumba
- *Closer to Free*—Bodeans
- *Unforgiven*—Go-Go's
- *Bad Reputation*—Joan Jett
- *I Melt With You*—Modern English
- *All Star*—Smash Mouth
- *Start the Commotion*—Wiseguys
- *Mamma Mia—Dance Remix*—A-Teen



The Bantam BA50 comes with a lanyard and an FM tuner, making it ideal for exercise.

Diary of a Chex Addict

You can't evaluate a calorie-tracking program like **BalanceLog** (www.healthetech.com) without fully integrating it into your life, which I decided to do for at least seven days. The software tells me I can have 2,010 calories per day and still drop a pound every week. I'm looking to shed 17 in all, to return to a more pants-friendly 170. Here's what happened.

Day 1, Breakfast: As is our usual Friday custom, my wife and I head to Woody's for omelets. I get the Egg Beater veggie with no cheese, hash browns, and wheat toast with butter. It's tricky to estimate some of these foods in BalanceLog—especially the serving sizes—but I make my best guesses. Later, I visit www.onlineconversion.com to help me convert the quarter-cup of green peppers I ate into a measurement the software understands.

Day 1, Lunch: I know Wendy's French fries will put me in an early grave, but I want to see how they'll impact my overall calorie count. I get the Grilled Chicken meal (politely declining the "Biggie-size" come-on) with Diet Pepsi. BalanceLog informs me, to my surprise and delight, that the fries have relatively little saturated fat, and that the entire meal has brought me to just 62% of my daily total (breakfast included). I can live with that.

Day 2: I run a 5K in just under 30 minutes and burn 428 calories in the process. It's like the bowl of Multi-Grain Cheerios I ate beforehand and the banana I gobbled after never existed! For lunch I decide on a gyro (man, I eat out a lot!) but order the sauce on the side and skip the fries. After dinner I sneak out to Starbucks for a tall decaf and a wedge of crumb cake—but still manage to finish the day a few calories under budget. I'm pleased until I realize the banana was the only fruit I consumed all day.

Day 3, Breakfast: The missus makes waffles. I eat three with syrup and a little butter, plus half a banana and a cup of OJ. Horror: the meal constitutes well over a third of the day's calories. One less waffle would have made all the difference. But I spend 20 minutes mowing the lawn and an hour pushing my daughter's stroller at the zoo. See you in hell, 375 calories!

Day 3, Dinner: I come to a startling realization: This experiment has already transformed the way I relate to food. I used to snack all day, sometimes just out of boredom, but now when I open the fridge or pantry, I instantly stop to consider calories. BalanceLog is like a personal assistant tapping me on the shoulder, saying "Uh-uh, no you don't." And I'm not the least bit annoyed by it. Quite the opposite, I enjoy tracking the foods I eat and getting instant gratification that I'm meeting my goal. It's frustrating to discover just how poor my diet really is—but that's the whole point, isn't it?

Day 4: Though BalanceLog has an admirably thorough database of foods, sometimes there's no choice but to guess. For instance, my favorite Chinese buffet serves a delicious chicken-and-veggies dish, but there's nothing even close in the database. I start to worry that even though I tend to overestimate my consumption, my daily totals might be hundreds of calories off. This is frustrating.

Day 5, Breakfast: Thank goodness the holiday weekend is over. Back to my usual routine, I eat a bowl of Cheerios, raspberries, a sliced banana and 1% milk. The tally: 340 measly calories, leaving me almost 1,700 for the rest of the day.

Day 5, Dinner: I skip it because I don't want a full belly during my 7 p.m. kickboxing class, which burns an incredible 866 calories. I finish the day several hundred calories under budget and feel downright giddy.

Day 6, Breakfast: I'd planned to wait until Day 7 before weighing myself again, but the curiosity is killing me. I've had a few slip-ups here and there and a few impossible calorie calculations, but ultimately I've stayed pretty close to the mark. The scale gives me the best possible news: 185, a loss of two pounds. BalanceLog has been so easy to incorporate into my daily routine, the calorie cap so easy to manage, that I've decided to stick with it for the duration. Here I come, 170!



Reviews

iPAQ H5450

Pricey, but loaded for bear

While all the industry is abuzz is about “cheap Pocket PCs,” HP has bucked the trend with yet another high-end iPAQ. The H5450 may cost more than a pair

802.11b/WiFi wireless capabilities. The software support for both is excellent. The Bluetooth setup wizard simplifies pairing the iPAQ with cell phones, GPS receivers, PCs, and other devices. The WiFi drivers can automatically detect available access points, so you won't have to deal with SSIDs and other esoteric WiFi setup issues.

The H5450 includes a fingerprint reader for biometric security. After a selectable amount of time has passed, you'll either need to enter a password or run your index finger across the reader. The reader almost always recognizes a fingerprint on the first pass, and is an easy way to protect handheld data without inconveniencing the user. You can also set the device to accept a traditional alphanumeric or PIN password, for cases where you share your handheld.

There are a number of other changes from earlier iPAQs. Most significant is the

welcome addition of a removable battery. Along with spare standard batteries, HP also offers an optional extended battery—although you can't use expansion sleeves with the larger battery attached. The headphone jack, relocated to the bottom of the device to make room for the WiFi antenna, can now serve as an input for an external mic for use with voice-over-IP applications. The H5450 adds a vibrating alarm option for silent alerts during meetings, and the “voice record” button now doubles as a hardware volume control.

Bundled software includes trial versions of a number of enterprise-oriented wireless applications, such as voice-over-IP and virtual private networking apps. The H5450 ships with full versions of Quick View Plus, the Presenter-to-Go PowerPoint display app, F-Secure FileCrypto, and the Pocket Watch world clock. Note that, as with all new Pocket PCs, Microsoft has deemed that Outlook 2000 be bundled instead of Outlook 2002.

The H5450 includes the excellent Nevo programmable remote control software, along with an enhanced IR transmitter. Gamers will enjoy the full versions of Bust 'Em, a supercharged Breakout/Arkanoid clone, and PocketTT, a spectacular 3D motorcycle racing game that supports multiplayer races via WiFi.

Is there still room for a \$699 Pocket PC when models with similar performance are selling for less than half the price? We think so. The built-in wireless transmitters would fill a pair of slots on an entry-level handheld, the biometric security features could prove a godsend should you lose a handheld filled with private data, and the wealth of expansion options available for the iPAQ line offer unmatched versatility.

—Denny Atkin



Dual wireless transmitters, biometric security, and a removable battery make the H5450 the most feature-packed Pocket PC yet.

of 64MB Dell Axims, but it works to justify its price tag with an extensive feature set, innovative biometric security, and compatibility with existing iPAQ peripherals.

At its core, the H5450 is similar to the H3900 series that preceded it. It boasts a 400MHz XScale processor, 64MB of RAM, a SD card slot, and an ultra-sharp 3.8-inch transreflective screen. The H5450 can use any XScale-compatible iPAQ sleeves—we tested a half-dozen sleeves from HP and third

The key addition to the H5450 is the inclusion of both Bluetooth and

iPAQ H5450

Hewlett-Packard

www.hp.com

\$699

Pocket PC 2002, 400MHz XScale processor, 64MB RAM, 48MB ROM, WiFi and Bluetooth

Pros

- Both WiFi and Bluetooth built-in
- Biometric security keeps data safe
- Removable battery
- Numerous expansion options

Cons

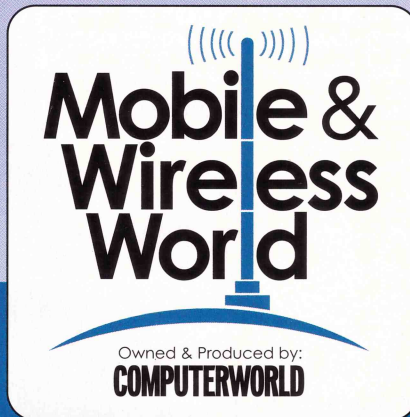
- Expensive
- Very large with expansion sleeve

A-



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reviews

Sony Clié PEG-NZ90

Kitchen sink sold separately

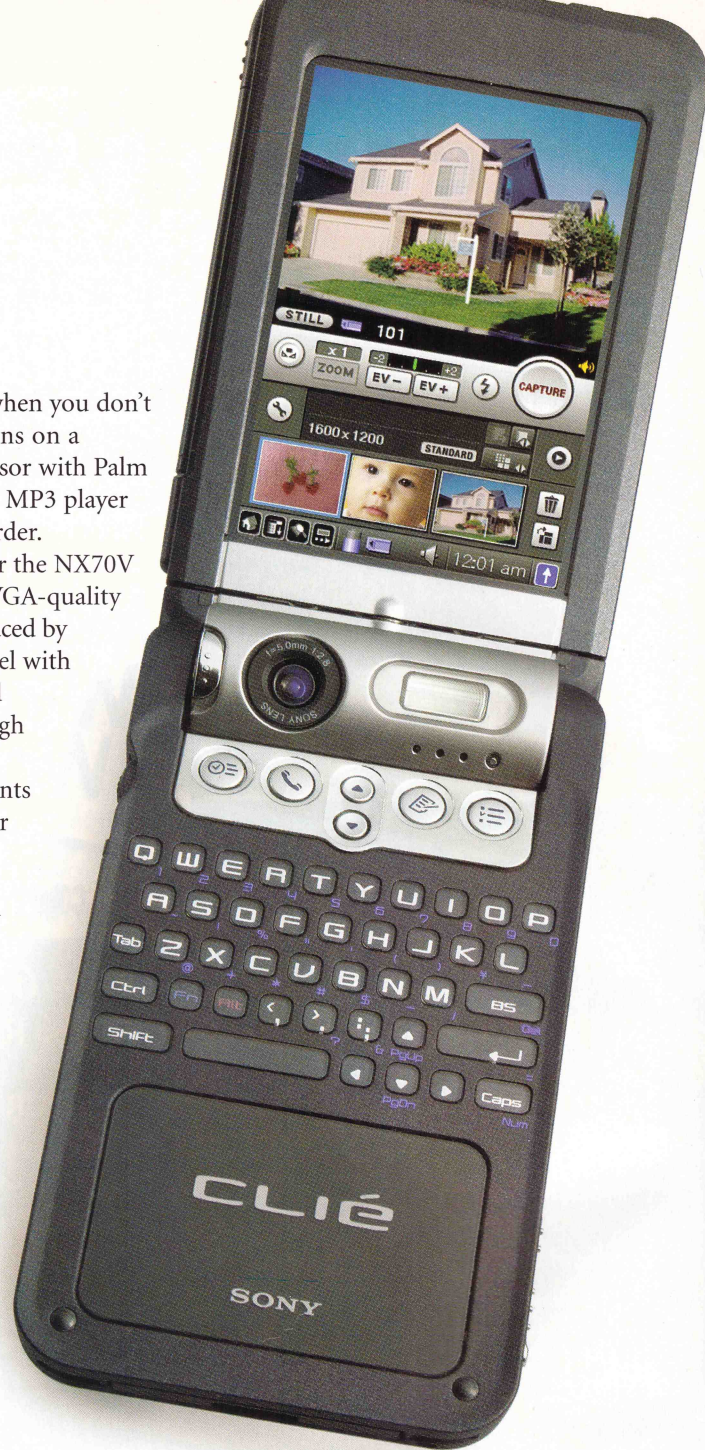
Thanks to Dell's Axim X5, low-cost PDAs will be the name of the game throughout 2003. With a price tag of \$799, though, the Clié PEG-NZ90 wants you to party like it's 2002 all over again. Sony is using the NZ90 to prove a PDA can be more than just an information manager—a lot more. It's a multimedia monster, packed with every imaginable high-end feature and designed to inspire tech lust in the hearts of geeks and power users everywhere. Does it succeed? To a degree, but not as well as we hoped.

If you're already familiar with the NX70V, that's a good place to start. The NZ90 uses the same articulating design: the hinged screen flips up like a miniature laptop to reveal a thumb-type QWERTY keyboard, and it can also flip over and down to work like a slate. It has the same gorgeous 16-bit color, 320x480-pixel display, with an onscreen Graffiti

area that disappears when you don't need it. The NZ90 runs on a 200MHz ARM processor with Palm OS 5, and includes an MP3 player and digital voice recorder.

Improvements over the NX70V are everywhere. The VGA-quality camera has been replaced by a two-megapixel marvel with a 2X digital zoom and integrated flash (though the lens no longer swivels—it always points straight out of the rear of the PDA). The zoom, we should point out, works only at resolutions of 800x600 or lower.

We were surprised and impressed with the quality of the photos; for the first time, you can use a PDA camera to take enlargement-quality pictures, and that's pretty amazing. While it's not quite on par with your average \$200 digital camera, the Clié does have three programmed auto-exposure settings (normal, night, and night portrait), a variable-power flash, and an optional spot meter. Images looked bright, sharp, and well-exposed on the PC, though we saw enough digital noise and color fringing to dissuade us from relying on the camera at anyone's wedding ceremony. The Clié also captures full-screen video with sound.



Among the NZ90's amenities: an improved keyboard, a removable battery, and built-in Bluetooth.



Sony's cradle can act as a "USB host," plug a supported printer in and you can print without using a computer.

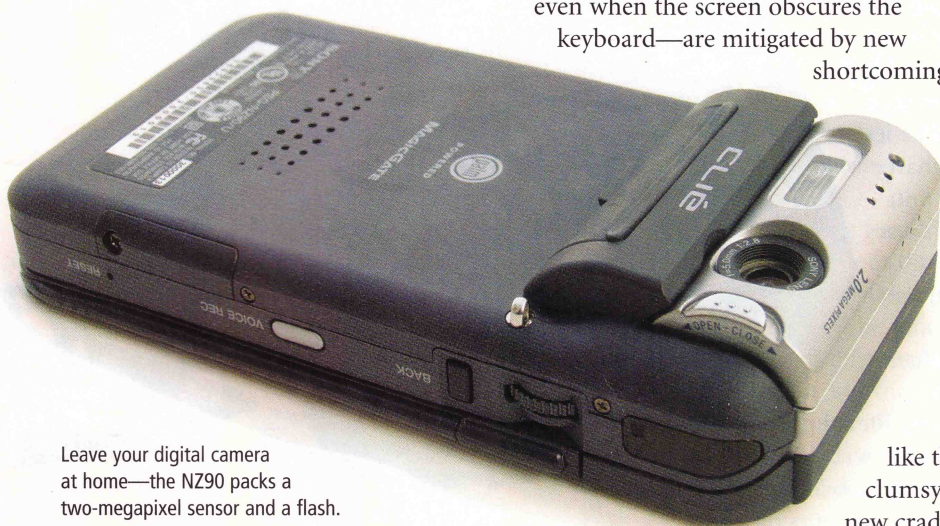
Want wireless? The NZ90 has the same CF-style "Communications" slot for Sony's optional Wi-Fi card (and still nothing else, unfortunately), but Bluetooth is built right in. The battery is removable, so you can extend the

runtime with spares. That's good, because we clocked the real-world battery life of the NZ at less than three hours with Bluetooth turned on.

Even the keyboard is improved; important keys like Space and Enter are bigger, and overall it has a very different feel. The Handheld Computing staff was divided, though: One editor preferred the action of the new keys, while another actually felt more at home with the bumpier NR/NX style keyboard.

physically reversed the orientation of HotSync port compared to the NR/NX, so this could pose a problem for other peripherals as well). Sony's engineers took a step backwards with other components as well. You need nimble fingers to attach the stylus to the lid, for instance, since it doesn't just slide into place. It kind of hooks into position, and takes effort to attach properly.

Clever touches—like a second set of application buttons that you can reach even when the screen obscures the keyboard—are mitigated by new shortcomings



Leave your digital camera at home—the NZ90 packs a two-megapixel sensor and a flash.

like the clumsy new cradle.

If you read a list of the NZ90's features, this PDA appears to have a lot going for it. Unfortunately, it all comes together into a pretty clunky device that's not nearly as impressive as the individual parts. Size is the biggest shortfall: It's 1.1 inches at its thickest and weighs 10 ounces—far too heavy for a comfortable ride in your pocket. The boxy shape and dark, gunmetal finish make it look like a piece of military hardware, devoid of personality.

Peripheral support is still dicey. There's no add-on keyboard available, and moving the HotSync port to the top rear of the device may mean there never will be one. Even the Sony Game Controller doesn't work, since the connector won't fit in the NZ90's HotSync port (inexplicably, Sony

Because the HotSync port is now in back, it's difficult to accurately seat the Clié, and it sometimes takes some jiggling to get the charge light to come on when you set the PDA in the cradle. The cradle itself is a fold-up, three-legged affair that collapses quite cleverly for travel. Unfortunately, the USB and AC adapter cables stick out of the side of the cradle instead of exiting the rear, which is an eyesore and a potential space issue on a cramped desktop. On the upside, the USB port can act as a "host," allowing you to plug supported printers into the cradle and print directly from your Clié.

Worst of all, the NZ90 comes with less than 11 of its 16MB free (as did the NX70V). It seems to us that an \$800 handheld should have at least 32MB, like Garmin's nifty new iQue 3600.

On the software front, Sony includes the usual king's ransom of multimedia apps, including Pictel Viewer, an outstanding program that displays common documents—like Word and PDF files—exactly as they appear on the desktop. But aside from the dubious ability to send images to other NZ90s, Sony failed to include any Bluetooth applications at all, preventing you from getting on the Internet or even dialing your phone from the NZ90. Out of the box, Bluetooth is essentially useless—though Sony promises to have some software available shortly after the NZ90 is available in stores. We were unable to test those applications, though, and don't know exactly what Sony has planned.

Sony came so close with the NZ90 that our hearts ache. It's packed with an incredible array of features, but it's priced like a desktop computer, not a handheld PC. And it lacks the polish we've come to expect from Sony. At the rate Sony has been releasing Cliés, Sony may have announced a newer, better version by the time you read this review. Our advice: wait for it.

—Dave Johnson

Clié PEG-NZ90

Sony

www.sony.com/Clié

\$799

Palm OS 5, 16MB RAM (11MB free), 200MHz ARM processor, 320x480 color, Memory Stick and "Communication" slots, removable rechargeable battery, Bluetooth.

Pros

- Half-VGA display
- Two-megapixel camera with flash
- Bluetooth, optional Wi-Fi

Cons

- Less than 11MB free
- Big and heavy
- Where's the Bluetooth software?
- Expensive

C+



reviews

Palm Tungsten W

What we have here is the ability to communicate

With the Tungsten W, Palm makes a valiant effort to lure corporate users from wireless handhelds like the Handspring Treo and RIM BlackBerry. How good is the bait? The Tungsten W's screen is vastly superior to the Treo's, while its Palm OS easily outshines the BlackBerry's proprietary software. However, it comes up a short in a couple key areas, meaning buyers will still have to weigh the pros and cons carefully.

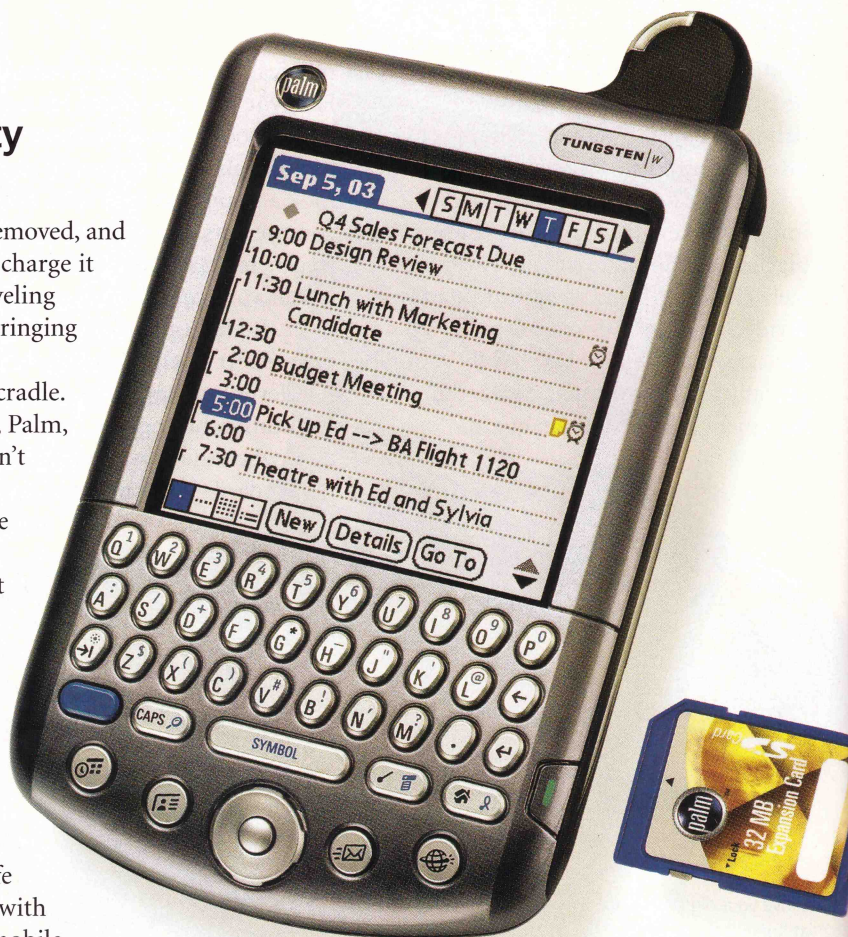
The Tungsten W represents not only Palm's first wireless model with a color screen, but also its first foray into voice communications. The tri-band, GSM/GPRS Tungsten W can make and receive phone calls, complete with caller ID, call waiting, conference calling (for up to six people), speed dialing, and your choice of ringtones. And like the Treo, the Tungsten W supplants the Graffiti area with a thumb-able keyboard—another first for Palm.

Unlike the OS 5-based Tungsten T, the W employs OS 4.1 and a 33MHz Motorola Dragonball VZ processor. Why Palm elected to take two steps backward with this device is beyond us, but at least the screen doesn't suffer: it's the same gorgeous 320x320-pixel, 65,000-color reflective display as found in the Tungsten T. However, stellar as it looks indoors, outdoors it must be tilted at just the right angle for comfortable viewing.

The Tungsten W has 16MB of RAM, an SD/MMC expansion slot, and Palm's Universal Connector. Not including its flip cover, the unit weighs 6.4 ounces and measures 4.8x3.1x0.65 inches (HWD). That makes for a fair bit of pocket bulk, but not much more than you get from a BlackBerry or Treo. Regrettably, its rechargeable battery

can't be removed, and you can't charge it while traveling without bringing along the HotSync cradle. Come on, Palm, if you won't give us a removable battery, at least let us charge the unit with just an AC adapter. On a brighter note, battery life is on par with the best mobile phones: 10 hours of talk time, and about eight days of standby.

One happy carryover from the Tungsten T is the 5-way navigator, which affords one-handed operation (though not as effortlessly as a jog dial does) and excellent game control. As for the thumb-board, it's among the best we've used, with comfortable spacing and excellent tactile feedback. Alas, it does require Fn-key presses for numbers and all symbols except the period. Fortunately, you can still write by hand if you prefer: handwriting recognition is provided courtesy of CIC's Jot (the off-the-shelf version, not the one about to become standard in all Palm OS devices), which offers a natural character set but also lets you opt for Graffiti strokes if you're already adept. Thus, the Tungsten W



There's much to like about the Tungsten W, but why oh why didn't Palm give it OS 5?

gives you the best of all possible data-input worlds.

But not, unfortunately, the best of all possible telephony experiences. To use the Tungsten W as a phone, you must plug in the included hands-free earbud/microphone headset. In many ways we like this approach, as it allows you to use the Palm while carrying on a conversation. On the other hand, you're forced to plug in the headset to make or receive a call—you can't just hold the Tungsten W to your ear (it has no microphone or front-side speaker). The headset itself sounds clear enough, and includes a button for answering and terminating calls (so you needn't fiddle with the Palm). But the earbud

occasionally fell out of our ear, and it gets uncomfortable before long. Palm should have opted for an ear-clip design instead.

Palm should also have opted for built-in Bluetooth, which is found in the Tungsten T but not here. It would enable the use of Bluetooth headsets and really create an ideal Palm/phone solution. The \$129 Palm Bluetooth Card should work, but the top would protrude awkwardly from the side of the Tungsten W.

There is a fairly clever add-on solution to the headset issue: the Palm-branded Audio Flip Cover, which looks almost identical to the stock cover it replaces but includes a speaker and microphone. With it you can hold the Tungsten W like a traditional phone. At press time, pricing wasn't available.

The Tungsten W is an e-mail tour de force, offering secure inbound and outbound messaging via Palm's aptly named VersaMail 2.0 app. It supports just about every kind of account imaginable, from HotMail to POP3 to IMAP to Exchange servers—and not

just one, but eight separate accounts. Plus, it includes the usual amenities, like folders, filters, sorting, and attachments of up to 2MB (which, thankfully, can be saved directly to memory cards). The Tungsten W also supports SMS messaging via a separate applet and comes with an ICQ Web clipping applet for real-time text chats. As for Web browsing, you can do it comfortably via the robust Palm Web Pro browser or the less-attractive WAP browser. The former lets you save pages for offline viewing and e-mail URLs to others.

Palm also bundles a familiar selection of extra software, including Documents To Go Professional Edition, Copytalk, MobileDB, PhotoBase, and MagicDogs (a collection of card games).

Unless you're inordinately wealthy or your company's going to foot the bill, you may have a hard time swallowing the Tungsten W's price tag. The unit costs \$549, which isn't terribly out of line with the competition, but there's also the monthly calling plan to consider. And if you want data, AT&T Wireless charges an additional fee on

top of the calling plan: anywhere from \$19.99 to \$39.99 per month for anywhere between 8 and 20 megabytes of data. Thus, to fully reap the benefits of this device, plan on spending a minimum of \$60 per month—and possibly quite a bit more.

The pricing wouldn't bother us so much if we were talking about an OS 5 device that had built-in Bluetooth, an MP3 player, a microphone (and while we're at it, a speakerphone), and all the other amenities we loved about the Tungsten T. There's no denying the corporate appeal of the Tungsten W, which ranks among the most capable wireless PDAs available today. It's just too bad Palm didn't go the extra mile to make this the home run it could have been.

—Rick Broida



The Tungsten W functions nicely as a phone, but you have to use the headset—which isn't always convenient.

Tungsten W

Palm, Inc.

www.palm.com

\$549 plus monthly service

GSM/GPRS wireless, Palm OS 4.1, 16MB RAM, 33MHz processor, 320x320 color screen, SD/MMC slot, 6.4 ounces

Pros

- E-mail, Web, and phone in one attractive package
- Gorgeous screen
- Comfy built-in keyboard; Jot/Graffiti included, too
- Wireless features nicely integrated with Palm OS
- Excellent battery life

Cons

- No OS 5, no high-speed processor
- Headset required to make/take phone calls
- Pricey, and you have to pay extra for data plan
- Bluetooth really should have been built in
- HotSync cradle required for travel charging

B



reviews

Olympus C-5050 Zoom vs. Sony DSC-F717 Cyber-shot

Clash of the 5 Mega-pixel Titans

Who would have guessed that, in just a few years, digital cameras could evolve from mere toys to serious photographic tools? There are now digicams for every conceivable user, from absolute beginners to advanced shooters. If you're serious about your photography—that is, if you want full control over your photos and the ability to print high quality enlargements—then you'll want to check out the Olympus C-5050 Zoom and the Sony DSC-F717 Cyber-shot. These five-megapixel cameras represent just about the best that digital photography has to offer for under a thousand dollars today.

Olympus C-5050 Zoom

The C-5050 Zoom doesn't stray too far from the look of the existing Olympus C-series. But while it is shaped like a typical compact camera, it's definitely engineered for the advanced photographer. The chassis is made entirely of magnesium and has a solid, rugged feel. The LCD display tilts—you can pull it out and position it for a variety of unusual shooting positions, like overhead and ground-level. There's also a hot shoe for an external flash and slots for two different kinds of media: the C-5050 accepts both CompactFlash and xD (a 32MB xD card is included).

The camera has a somewhat limited 3X optical zoom (and 3.4x digital zoom, for about 10X in total), but an impressive f/1.8 maximum aperture for lots of light-gathering capability. You can also adjust the camera's ISO setting from 64 to 400 for a variety of lighting situations. Combined with multiple metering modes and excellent white balance settings, you have a camera that's incredibly flexible for a wide variety of shooting situations.

The C-5050's main control ring lets you dial in program mode, shutter- and aperture-priority, as well as full manual and several scene specific programs, like night, landscape, portrait, and sports. Want to take a bunch of photos without that dreaded "digital camera lag?" Switch to a motor drive mode to capture up to four frames at 3.3 frames per second—even in the camera's highest resolution. The C-5050 can also capture short MPEG movies.

Speaking of resolution, Olympus lets you choose from a whopping ten resolution/image quality combinations, from 640x480 all the way up to 2560x1920, plus an "interpolated" 3200x2400 pixel format that's intended for making very large prints.

All that can be a lot to handle on a compact camera body, but Olympus

does a reasonable job of making the features accessible. Press one of the many quick-access buttons scattered around the camera and turn the jog dial to change almost any camera setting. This system only breaks down in a few places; we found it difficult to use the camera's manual focus mode, for instance, and sometimes felt like we were playing Finger Twister to access all the features.

Sony DSC-F717 Cyber-shot

If the C-5050 looks like the quintessential compact camera, then the DSC-F717 is more akin to an SLR for cyborgs; its all-aluminum body is dwarfed by a huge lens barrel that swivels up and down. Unlike the C-5050, the camera has no true optical viewfinder; in addition to the ordinary LCD viewfinder, a small electronic

The C-5050 packs a wealth of exposure options into a compact camera body.



Sony's flagship camera, the Sony DSC-F717 is an incredibly powerful, SLR-like digicam.

viewfinder sits behind a comfortable rubber eyecup.

With a lens as big as this, you expect great optics. Sony doesn't disappoint—it features a massive 5X optical zoom which, when combined with the 2X digital, has the equivalent range of a 38-380mm zoom on a film camera. Its maximum aperture is $f/2$ —not bad, but the C-5050 is slightly better.

Though they look quite different, the two cameras share much in common, like the external flash hot shoe, wealth of exposure modes, multiple metering options, and sequential shooting features that let you capture several pictures per second. It's in the details that we see what sets each camera apart. Both cameras can freeze action scenes at 1/1000-second, for instance, but the Sony can make a 30 second time exposure. In contrast, the C-5050 only goes to 16 seconds. Olympus's sequential shooting mode is more flexible than Sony's, though, since the DSC-F717's burst mode forces you to take a set of three images each and every time. Sony has a much broader ISO range—it goes to 800, which is twice as light-sensitive as the C-5050's maximum of 400. And Sony relies on a superb "holographic autofocus" that blasts an eye-safe laser at the subject in low light for faster, more reliable focusing.

Sony includes a few more goodies you won't find elsewhere. Night Shot mode uses infrared to take black & white images in total darkness. Night Framing uses infrared to illuminate a dark scene in the viewfinder, but the actual picture is taken with flash. It's a useful feature that lets you properly frame and expose images you wouldn't otherwise be able to get. The DSC-F717 can also resize images (such as for e-mail) while they're still in the camera, and even cut an



of the lens can be used to manually adjust focus, for instance, or as an alternate way to change the zoom setting. Many other camera features are easily accessed from a jog dial, but you don't have to juggle other buttons at the same time to get them to work.

Your decision may even come down to issues like memory and batteries. xD card readers aren't as common yet as Memory Stick readers, but Olympus wisely allows you to load CompactFlash and Microdrives in the C-5050 as well. Olympus also includes 4 AA-style NiMH batteries and a charger; Sony uses a standard camcorder battery, and doesn't bundle an external charger.

Bottom line? Though the quality of pictures taken by both cameras were uniformly excellent, we simply had more fun with the DSC-F717, and that's the camera we'd want to keep. But if you want to take excellent 5-megapixel images and would rather spend that extra \$200 on a memory card, the Olympus C-5050 is a very close second.

—Dave Johnson

MPEG movie into pieces, allowing you edit your movie and delete parts you don't need to reclaim Memory Stick space.

Almost Too Close to Call

Make no mistake: if you're shopping for a five-megapixel camera and want oodles of control, either one of these models is a winner. The Sony costs \$200 more, but we feel that you really get \$200 more value. The camera is easier to use and generally feels more like a traditional SLR in your hands. A ring at the end

C-5050 Zoom

Olympus
www.olympusamerica.com
\$799

5 Megapixel, 3X optical zoom,
32MB xD

Pros

- Super-high interpolated resolution
- Many exposure options
- Dual memory cards
- Excellent sequential shooting mode

Cons

- Control buttons scattered everywhere
- Only 3X optical zoom

A-



DSC-F717 Cyber-shot

Sony
www.sony.com
\$999.95

5 Megapixel, 5X optical zoom,
32MB Memory Stick

Pros

- Generous 5X optical zoom
- Low-light infrared shooting modes
- Outstanding exposure controls
- SLR-like feel

Cons

- Expensive

A



reviews

Samsung SPH-i330

Bucking the trend toward smarter smartphones

If you're in the market for a Palm OS smartphone, you currently have a number of choices: a Handspring Treo, a Kyocera 7135, and the new Samsung i330—a second-generation successor to the generally unpopular i300. At face value, the i330 has a lot more going for it: a slimmer profile, better screen, more memory, and 3G (i.e., fast) Web access via Sprint's CDMA 2000 network. But are these improvements enough to topple the competition?

The i330 is physically similar to its predecessor, this time with rounded edges and a tapered bottom. Thus, it feels better in your hand—but still has buttons on either side that are far too easy to press by accident. The screen is noticeably brighter, with almost none of the streaking that plagued the i300, but it remains a 160x240-pixel, 256-color affair. You still can't collapse the software-based Graffiti area to gain more screen estate (still no ink trail beneath your stylus, either), and the limited color depth means the i330 isn't ideal for viewing photos—ironic given that Sprint PCS plans to offer a digital camera add-on (specs unavailable at press time). Stranger still, Samsung opted for Palm OS 3.5.3 rather than 4.0 or 5.0. Already this feels like last year's model.

Fortunately, phone integration with Palm OS apps doesn't suffer for it—you can still dial from your address book.

Samsung supplies Handspring's Blazer for Web browsing, an enjoyably speedy experience on the i330 thanks to Sprint's 144Kbps CDMA 2000 network. While there's no way to tell exactly how fast we were surfing (40-60Kbps is the usual range), Web pages usually appeared within a second or two. Unfortunately, the only included e-mail option—Sprint's PCS Business

Connection—limits you to corporate servers. If you want to access mail via your ISP, you'll need a third-party program like Eudora or SnapperMail. On a positive note, Samsung bundles full versions of six great games, including Bejeweled and ZioGolf.

The i330's 16MB of RAM should prove sufficient for most users, but we still wish it had an expansion slot (if anything, to provide the security of having a backup on the road). The Kyocera 7135 does, and plays MP3 tunes to boot. As a phone, the i330 serves up the usual amenities: speakerphone, voice mail, voice dialing, speed dialing, Caller ID, call logs, and a variety of pleasing polyphonic ringtones. Our only complaint is that there's no flashing LED or other indicator to let us know the phone is on. You have to activate the screen to check.

Samsung promises 2.5 hours of talk time and 4 days on standby from the standard battery, and our informal tests bear this out. One huge plus: the phone also comes with an extended battery, which adds a bulge to the back but provides even more talk/standby time. There's a slot in the HotSync cradle for charging whichever battery's not in use.

If you're intrigued by the i330 but prefer a clamshell design (as we do), watch for the SPH-i500, which should be available by the time you read this. Of course, neither model matches the features of the Kyocera 7135, so make sure to investigate the latter (as well as the Treo) before making a buying decision.

—Rick Broida



Samsung's i330 is a solid smartphone, but it's not on par with the latest offerings from Handspring and Kyocera.

SPH-i330

Samsung

www.samsungusa.com

\$499.99 plus monthly service

CDMA 2000, Palm OS 3.5.3, 16MB RAM, 66MHz processor, 160x240 color screen, 5.8 ounces

Pros

- A very good phone and a pretty good PDA
- Comes with spare battery, carrying case, and six above-average games
- Optional digicam add-on

Cons

- No POP3 e-mail software included
- Still can't collapse Graffiti area
- No expansion slot
- Side buttons easy to press accidentally
- No indicator that phone is on

C



HandStory Suite 2.3

Documents to go... and images and Web pages, too

Why rely on separate programs to read e-books, view photos, download Web clips, and so on when you can do it all under the umbrella of a single application? That's the idea behind Namco Interactive's HandStory Suite, which strives to replace AvantGo, Palm Reader, and several other seemingly disparate programs. Is this jack of all trades a master of some, or just more trouble than it's worth? We reviewed the Palm OS version; it's available for Pocket PC as well.

Within an interface that's so simplistic it's almost confusing, HandStory lists all memos, Web clips, Doc files, e-books, and images. You can categorize, delete, and rename these files, as well as move them between RAM and memory cards.

As an AvantGo alternative, HandStory is decidedly compelling—especially given that it supports OS 5, high-res graphics, multiple font sizes, memory cards, and HiRes+ screens (none of which AvantGo does currently). At press time, Namco offered about 225 content channels—not nearly as many as AvantGo, but some good stuff (everything from CNN Sports Illustrated to Techbargains to USA Today). The software doesn't automatically update channels every time you HotSync (a longtime AvantGo annoyance). Instead, it downloads updates once per day, in the morning when you first turn on your PC. Smart. And thanks to the Windows-based Clip Editor, it's an extremely simple matter to add your own sites—complete with graphics, variable link depth, and so on.

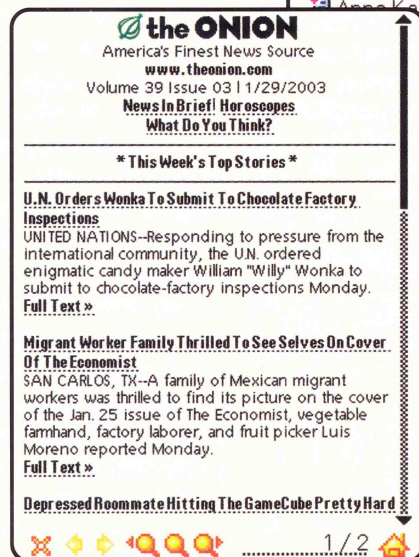
HandStory makes for a passable Doc reader, with features like bookmarks and autoscrolling. Namco offers a free library of public-domain e-books that have been converted to HandStory format (odd, given the software's support for Doc files). They're admirably easy to load on your

handheld: just click the Plus sign next to the desired title on the HandStory site.

Part of HandStory's power lies in the ease with which it converts desktop documents—text, images, Web pages, and HTML files—for viewing on your handheld. Usually it takes no more than one or two mouse-clicks. For instance, when you copy any text to the Windows clipboard, then click the HandStory icon in the System Tray, the text is immediately pasted and prepped for conversion. For a photo, you simply right-click its icon and select Save to Palm. You can even input new addresses, memos, and Doc files right from the converter. Alas, it doesn't accommodate Word files—a big disappointment.

HandStory does its weakest work as an image viewer. On the desktop side, it affords numerous resizing and color-management options prior to conversion. But on your handheld, you can do little more than view your photos. No slideshows, no zooming, and no support for images that haven't been converted to HandStory's unique format. The program also offers little incentive to switch from Memo Pad, save for unlimited document length. It doesn't offer color text or any other such extras.

One functional complaint we have with HandStory is the sometimes-



HandStory 2.3 adds a wealth of features for higher-end handhelds like the Clie NX and Tungsten T.

HandStory		All	All
Clie Planet Mobile Edition	23K		
ClieWorld Magazine	639K		
Drinkboy	99K		
Palm InfoCenter	199K		
PalmPower Magazine	57K		
Techbargains	8K		
The Onion (D)	118K		
USA Today (D)	851K		
Aesop's Fables	87K		
Aesop's Fables (I-III)	473K		
1 Pref	66K		
1 Vol1	42K		
e of Chalion (Ex...	222K		
ure of Dorian Gra...	69K		
1	263K		
8L	270K		
8L	1549K		
Category		Del	Details

lengthy delay (represented by the onscreen message "Moving") when starting the program after a HotSync. But that's a small price to pay for crackerjack Web-clipping capabilities, under-one-roof text and image viewing,

super-easy desktop conversions, and excellent support for higher-end handhelds.

—Rick Broida

HandStory Suite 2.3

Namco Interactive
www.handstory.com
\$29.95

Pros

- Simple, unified interface for memos, Doc files, images, and Web clips
- Easily converts desktop materials for viewing on your handheld
- Web clipping vastly superior to AvantGo
- Supports OS 5, Navigator, HiRes+, etc.

Cons

- Weak image viewer
- Won't convert Word files
- Limited e-book and Web-clip choices
- No Mac support

B



reviews

Mazingo

Give us J. Lo and we'll consider it

Most handheld users are familiar with AvantGo, the excellent free service that downloads news and information channels when you sync with your PC. Mazingo is like a multimedia version of AvantGo, delivering TV shows, movies, music videos, e-books, audiobooks and other content to your Pocket PC (and, in the near future, your Palm Powered handheld). Imagine downloading the latest episode of *Alias*, a new Michael Chabon novel, or a batch of Jennifer Lopez videos just before you leave for a trip, and it's easy to see the appeal of such a service.

Unfortunately, imagining is all you can do for the moment. While Mazingo currently boasts some 600 "channels," there's very little of actual interest. *Celebrity Justice* has the highest profile of the seven TV shows available at press time, while *Little Shop of Horrors* is the marquee film. We also found a smattering of music videos, a wide variety of daily comic strips (from *Bizarro* to *Ziggy*), a dozen Sporting News radio shows, and miscellaneous news and weather programs. As for the extensive e-book library, it consists wholly of public-domain classic literature—everything from Mark Twain to Henry James. These books are readily available elsewhere, and free.

The Mazingo Pocket PC software serves as a front end for most of your selections, launching PocketTV (included as part of the installation), Microsoft Reader or Windows Media Player for videos, e-books and audiobooks, respectively. Comic strips (which, thoughtfully, arrive five days' worth at a time) are displayed within the program's simplistic viewer. While all Mazingo content looks good and sounds good (videos can even rotate

90 degrees for "widescreen" viewing), we found at least one oddity: the Weather Channel video gave us a weekend forecast, even though we downloaded and watched it on a Tuesday. In that same vein, we noticed that the date isn't always apparent for any given news segment. Is this yesterday's report or today's?

Plan on investing in a big memory card—256MB at minimum—if you want to watch movies. The shortest feature nabs 73MB; the longest, 227MB. Throw in some TV shows and music videos, and you'll rapidly run out of space. Plus, it takes time to download all this stuff; users who don't have broadband Internet access need not apply.

Mazingo's pricing structure is quite reasonable—or would be, if it netted you better content. For just \$4.95, you can try the service for five days. A subscription costs \$14.95 per month, or \$94.95 if you prepay for a year. Whatever plan you choose, you get to download unlimited content—a major plus. Mazingo also offers a free AvantGo-like text service, but at press time it hadn't yet been integrated into the Digital Video Package we tested.

Ultimately, Mazingo has the feel of a work in progress, a potentially wonderful service hindered by valueless content and the need for more storage



Mazingo has the potential to be big, but needs to offer some worthwhile content.

space than most users have. Both issues should resolve with time, and we truly hope they do. We'd gladly pay the subscription charge if we could download some good stuff.

—Rick Broida

Mazingo

www.mazingo.net
\$14.95/month

Pros

- Some videos play full-screen
- Subscription price includes unlimited content

Cons

- Not much interesting content—yet
- Video programs require a lot of storage space

C-



SnapperMail

Excellent attachment support, but it's still cooking

Handheld e-mail can give you a real business edge on the road, allowing critical access to important communications on the road. But with so many business e-mails containing attachments—spreadsheets, word documents, PDFs, or JPEG images—many users have had to continue to rely on desktops and laptops for full e-mail access. Now SnapperMail promises to give Palm Powered handheld users the ability not only to view attachments, but to edit them and send them back to desktop users as well.

SnapperMail is one of the few Palm OS e-mail apps with full attachment support. SnapperMail sends and receives attachment in native format. This means you can pop in an SD card from your digital camera and e-mail an image of a new property directly to a client's desktop computer, or download a VCF file and tap it to enter it directly in your handheld's contact database. The SnapperMail package includes Lite versions of HandZipper and JpegWatch, which lets you open Zip files and view JPEG graphics directly from within SnapperMail. The program currently works with Quickword and a free conversion server to allow you to download Word documents, edit them on your PDA, and then e-mail them back to desktop Word users—even if those users don't use handheld computers themselves. The SnapperMail API will allow other programs to directly support opening and editing SnapperMail attachments, so expect to see wide third-party support. There's no limit to attachment size, other than available memory/storage card space.

The attachment support allows a couple of neat tricks. First, you can beam attachments—and because they're kept

in native format, you can beam them not only to other Palm Powered handheld users, but also to Windows 2000/XP laptops, Pocket PCs, and other devices that support the IrOBEX standard. Also, when you attach a file stored on a memory card to a message, SnapperMail copies that file to your handheld's main memory, allowing you to pop out the memory card and use a Bluetooth or WiFi card to connect to the Internet.

Standard e-mail handling is good, if somewhat incomplete in the release available at press time. The program had no problem downloading and displaying a 160K ebook embedded in an e-mail message. SnapperMail shows detailed status information during e-mail uploads and downloads. The first release supports the POP3/SMTP e-mail standards used by most Internet Service Providers; corporate users who rely on IMAP4 will have to wait, as that's still in development, as is support for using a conduit to sync with desktop e-mail applications. Snapperfish promises the periodic and scheduled automatic e-mail checks will be added before the program's final release.

SnapperMail supports multiple e-mail accounts, and you can toggle individual accounts on and off—great for ignoring work e-mail on weekends. Unfortunately, the current release doesn't include e-mail filtering capabilities; filtering and folders are on the “upcoming features” list.

At the rate development is progressing, this player has the potential to be a standout. By the time you read this, Snapperfish plans to have released version 1.6, with HTML support and a number of other enhancements. Version 1.7 (slated for March at press time) should have separate folders for each e-mail account, tappable web URLs, and



SnapperMail's message list lets you drag-select messages, allowing you to quickly delete Spam and other unwanted emails.

the ability (with an upcoming version of Quickoffice) to natively open, edit, and send Word, Excel, and PowerPoint documents without having to use a conversion server. Version 1.8 promises full filtering support. All v1.x upgrades will be free with the standard registration.

Our rating has to be based on the version we actually tested however. In its current stage of development, missing features such as folders and filtering are enough to keep the program from getting a “Top Pick” rating. If Snapperfish follows through on its development plans, Snappermail will soon be the premiere Palm OS e-mail app.

—Denny Atkin

SnapperMail

Snapperfish, Ltd.

www.snapperfish.com

\$34.95 (Includes all v1.x upgrades;

\$69.95 with free updates for life.)

Palm OS 3.5 or higher

Pros

- Superb attachment support
- Intuitive interface

Cons

- No filters yet

B+



reviews

BalanceLog 2.0

Handheld health

With the possible exception of performing brain surgery or carrying a handful of water, nothing is more difficult than losing weight. Numbers represent a big part of the problem: the sheer accounting of calorie-counting can discourage even the most determined dieter.



BalanceLog keeps your calories in check by letting you log foods as you eat them.

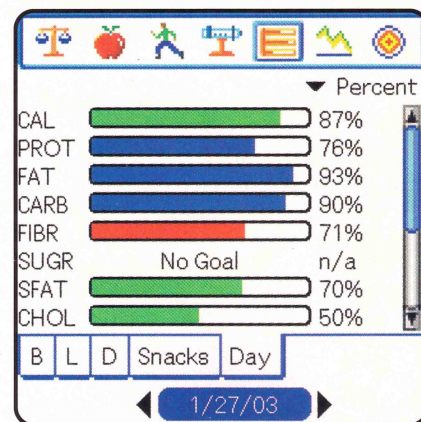
Enter BalanceLog, a smartly designed and effortlessly easy tool that helps you determine a calorie cap relative to your weight-loss goal. It then helps you log your food intake and exercise for the day, showing you instantly their caloric impact. If you're just as interested in nutritional information, BalanceLog has you covered there, too, with data on everything from carbs to cholesterol, saturated fat to sugar.

The software includes a database of over 4,000 foods—including menus from two dozen restaurant chains—and 300 exercises. You can easily add foods to the database: just record the relevant information from the FDA-standard Nutrition Facts label (the blank fields are even in the correct order to simplify data entry).

BalanceLog may not have the largest database, but it is by far the easiest product in its class to use. Icons across the top of the screen switch you between the software's seven main components: My Day, Meals, Exercises, Body, Reports, and so on. It's a snap to record a food you've eaten: you can cull through the database based on food groups and categories, or simply use the Find option for a fast search. You can also save and select "menus"—multiple foods you eat regularly—to save time in the future. As you record items, the software keeps a running tally of calories consumed—right alongside your allowable daily maximum. BalanceLog's reports include an at-a-glance daily nutrition chart, as well as graphs and summaries of your progress over time.

Because it's so easy to use, and because your handheld probably stays close to you throughout the day, BalanceLog really can help you meet your goals (see the "Shape Up!" feature in this issue). However, it has one fault that's hard to get past: Certain foods, especially those in restaurants, are just plain impossible to log accurately. Trying to estimate can prove daunting—and discouraging. Of course, if you're serious about weight loss, you can circumvent this by eating "known quantities"—foods you make yourself or you know are in the database.

BalanceLog is already pretty pricey at \$49.95; an extra \$20 buys you the robust Windows counterpart, which includes Web synchronization for logging and tracking from any browser. A new option, BalanceLog Pro (which we didn't test), lets you share your Web-recorded data with, say, a doctor or personal trainer, and access tips,



You can keep close tabs on your progress thanks to reports like this one.

recipes, and community message forums. That feature is free to try for three months, \$9.95 per month thereafter.

In a perfect world, BalanceLog would not only monitor your progress, but also provide suggestions based on it ("You're not getting enough Vitamin A—eat more carrots," that kind of thing). Nevertheless, the software is remarkably easy to integrate into your life, admirably easy to use, and undeniably effective at helping you manage your diet.

—Rick Broida

BalanceLog

HealtheTech

www.healtheTech.com

\$49

Pros

- Simple interface
- Provides instant feedback on goals and progress
- Easy to add new foods to database
- Optional Windows and Web components

Cons

- Expensive
- Difficult to estimate certain foods/meals
- No daily reminders or nutritional guidance

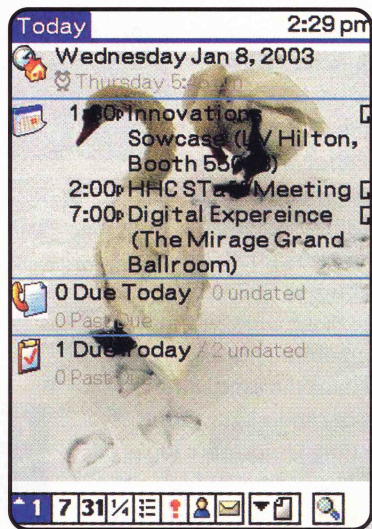
A-



Agendus 6.0

Seemingly named after one of the lesser Roman gods, Agendus is actually the new moniker for Action Names, long considered one of the best replacements for the core Palm OS applications (and a Top Pick winner in 2001). Agendus 6.0 delivers more of the same great features, seamlessly combining the Address Book, Date Book, and To Do List into a single, powerful program.

All your old favorite features are still here. You can link to-dos and appointments to entries in your Address Book, effortlessly



The Today screen, with its wallpaper feature, is the most visible update to this excellent information-management program.

maintain a contact history, apply color icons to your calendar events, and see your daily activities and to-do items on a split screen. Sony Clie NR/NX/NZ owners will especially love Agendus, as it takes full advantage of 320x480-pixel HiRes+ screens.

The most important addition to Agendus 6 is the cool Today View, which you can “wallpaper” with a favorite digital photo. Most of the other new goodies are subtle and likely of interest only to longtime users: changes in the various calendar views, better filtering, improved dialog boxes, and so on. The program also integrates with external Iambic apps like FastWriter, SalesWarrior, and the new Agendus for Windows (a Palm Desktop/Outlook replacement designed expressly for Agendus).

The version we tested still needs some tweaking. The Today screen appears only if you specifically choose it from the view menu, and there's a display glitch with some Clies. Even so, Agendus continues to reign as one of the best core-app alternatives for Palm Powered handhelds. All hail Agendus!

—Dave Johnson

iambic
www.iambic.com
\$24.95

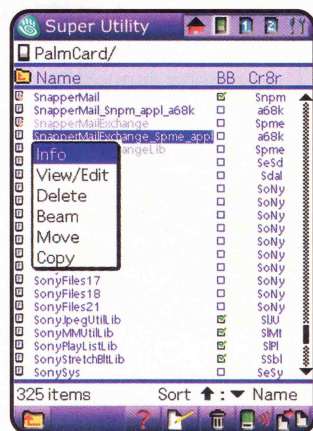
A-

SuperUtility

SuperUtility is a powerful Palm OS app that offers unmatched versatility for managing files in your handheld and on expansion cards. Locating, moving, deleting, and renaming files and directories has never been easier. Casual users will likely never need SuperUtility. But more expert users, particularly long-time Palm OS users who may have lots of orphan files that could be deleted to free up memory, will find it to be an excellent file manager.



SuperUtility runs fine in lo-res screen, but on OS 5 and Sony Hi-Res screens the interface is beefed up with a 3D look and (on Clies) a hi-res font.



SuperUtility supports Windows-style multiple selection: holding down the Date Book button works like the Ctrl key, letting you select multiple individual files; the Address button lets you select a sequential group of files. You can view and sort files by name, creation or modification date, size, and other data types, simplifying the process of grouping files together to move or delete them. You can also search for files on expansion cards, a very useful feature if you're not sure which directory an app buried your document in.

Double-tap a file or directory to get info on it, delete/move/copy it, or beam it to another handheld. You can even launch application files directly from within SuperUtility. Not sure what a particular database is used for? The “View/Edit” option lets you view a file's contents in both hex and text formats, which may give a clue as to what program it's associated with. Developers and very advanced users can also modify resource types and IDs, or insert and delete bytes—a useful but somewhat dangerous feature best left to experts, as it can corrupt a file if used improperly.

—Denny Atkin

Handmark
www.handmark.com
\$19.99

A-

reviews

Quickoffice Pro 6.2

Cutting Edge Software's Quickoffice suite is the stuff laptop replacements are made of. The newest version inherits both a "Pro" in its title and a PowerPoint viewer. The result? The best Quickoffice ever.

Quickoffice Pro comprises four key components: Quickword, Quicksheet, Quickchart (a companion charting program), and Quickpoint (a PowerPoint viewer). The programs have a consistent interface, take full advantage of HiRes+ displays (like on various Sony Clie models), and sport superb compatibility with Microsoft Office (though not perfect—in testing, Quickword has some trouble with complex formatting in Word documents).

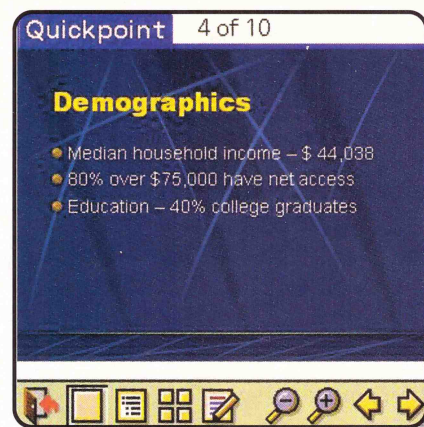
Unfortunately, Quicksheet remains the least user-friendly of the major spreadsheets for the Palm OS. The program's 80 functions are difficult to get to, and there's no one-tap way to generate a chart from a set of spreadsheet cells—you need to embed the CHART function in a cell instead.

So what's new? Compatibility with Palm OS 5, for starters, along with the ability to convert TrueType fonts into handheld fonts, a default font selector, expansion card support, and Quickoffice Desktop—a Windows app that lets you manage all your handheld-bound documents.

Quickoffice Pro also marks the introduction of Quickpoint. You can view slides on your handheld and, in conjunction with iGo's Pitch VGA adapter, deliver full-resolution slideshows on any video projection system. There's no option to edit your slides, though, a minor disappointment.

Thanks to excellent font support and a clever zoom function, Quickoffice looks simply amazing on high-res Palm devices. It'll be our first choice when we need to edit documents on the go.


—Dave Johnson



Quickoffice Pro now includes the capability to view PowerPoint slides on your PDA.

Cutting Edge Software
www.quickoffice.com
\$49.95

A-



Pocket Quicken

Pocket Quicken is an extremely useful companion to the desktop version of the program (Quicken 99 or newer on Windows, 2001 or newer on Mac). Quicken users know the program is only useful when you bother to fill in all your transactions. Pocket Quicken is the perfect way to insure you do

just that. Enter transactions virtually anywhere, then seamlessly transfer them to Quicken next time you HotSync.

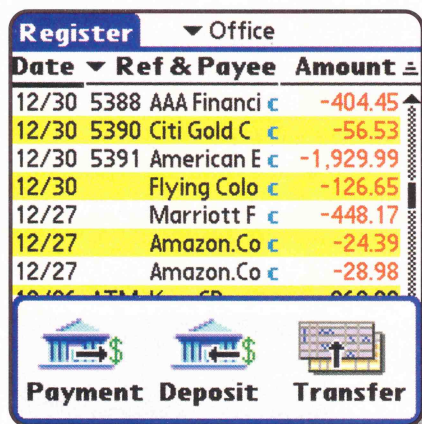
The interface is very reminiscent of Quicken, complete with the "QuickFill" feature for categories and payees. As you enter a check written at the grocery store,

writing the first couple of characters of the store's name brings up all the information from your last transaction there. Change the payment amount (already highlighted) to the current figure, tap "Done," and you're finished.

Pocket Quicken brings down data entered on your desktop, so you can use it as a reference on where your money's going. There's an excellent budgeting feature that lets you track just how much you've spent on each category this month. The program tracks bank, credit card, cash, asset, liability, and investment accounts.

The program supports only one Quicken data file, so if you keep your personal and business expenses in separate files, you'll have to choose which one to keep on your handheld. Also, while we find the budget feature one of the most useful in the program, it doesn't sync with the desktop version of the program. Finally, the price is high—more than we paid for our copy of Quicken 2003. Still, for dedicated Quicken users, it's a must-have.

—Cary Naismith



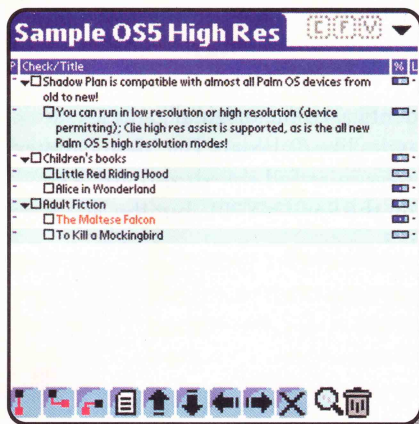
Enter your transactions on the go and avoid long sessions keying in your checkbook register at your PC.

Landware
www.landware.com
\$39.95

B+



Shadow Plan



ShadowPlan has every feature you could want in a business-class outliner, but it takes time to learn.

complicated. To fully master what Shadow Plan has to offer—indeed, to get started with even the most basic list—you should be prepared to read the manual thoroughly.

In return, you'll quickly learn the ropes of one of the most robust, powerful outline/task-management tools ever

Outlines, checklists, to-do lists—these are simple organizational tools designed to make life easier. It's ironic, then, that any program designed expressly for the creation and management of these tools—in this case, CodeJedi's Shadow Plan—would be so

created for the Palm OS. Shadow Plan supports an endless array of sorting, filtering, importing, and exporting options. The software makes particularly good use of “tags”—categories you can assign to any list or item. You can create an unlimited number of tags, sort and filter by them, and associate multiple tags with single items. Shadow Plan also allows you to link items to entries in your handheld's address book, calendar, memo pad, and to-do list.

For an additional \$9.99, Shadow Desktop for Windows (Mac and Unix versions are imminent) lets you synchronize, open, and edit files on your PC—but without all the filtering and sorting features of the handheld version (the developer plans to add those capabilities in future releases).

To his credit, developer Jeff Mitchell supplies a quick-start guide and a reference manual—both in HTML format, both thoroughly illustrated with screenshots, and both admirably complete in their coverage. Most users will need to read them carefully to learn this complex, feature-rich program. But it's well worth the effort.

—Rick Broida

CodeJedi
www.codejedi.com
 \$12.99
A-

FatFinger



FatFinger is configurable to display 1 to 3 lines of text as you type; after you enter text, the program you're using reappears.

typewriter QWERTY keyboard, and a third in ABC order. Onscreen keys are large enough to tap without using a stylus, even on small-screen devices like the Kyocera 7135. You can swap between the four key screens—letters, numbers,

If you've been looking jealously at the keyboard on your friend's Treo, Tungsten W, or Clie, don't despair. Avaion's FatFinger gives you a full-screen, tappable keyboard that's easily operable without a stylus.

FatFinger offers three keyboards—two based on the standard

symbols, and international characters—with a single tap. The layouts are very logical and easy to learn.

Even experienced Graffiti users may find FatFinger useful, as it gives quick access to symbols and international characters. You can mix Graffiti and key entries, allowing you to use the stylus for writing and then quickly tap an onscreen key to fill in a symbol that your unfamiliar with the Graffiti stroke for.

FatFinger requires a hack manager like the bundled X-Master to run. Configuration options including key shape and color, as well as how many rows of text to display at the top of the screen.

We wish there was a “period” on the main screen, given how often that's typed. You'll spend a lot of time tapping the symbol key, tapping the period, and then tapping the alphanumeric key. Also, there's no Palm OS 5 version yet, but it's in the works. The Palm OS 5 version won't require X-Master, so it will be easier for novices to configure. And of course, you'll want to watch for jagged nails and greasy fingers to avoid scratches and smudges.

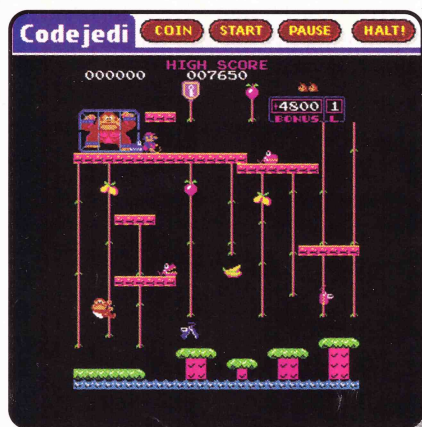
—Denny Atkin

Avaion
www.avaion.com
 \$14.95
B+

reviews

XCADE

In 1979, a future Handheld Computing editor spends way too much time after school huddled around the Space Invaders, Asteroids, and Galaxian arcade machines at the local mall. Fast forward to 2003. Same gamer. The velour shirt's gone, and the hairline's following. But the games are the same.



Donkey Kong Jr., Pac Man, Space Invaders, and Pengo are among the 17 games XCADE supports.

No, he hasn't collected a basement full of arcade units. He's playing the games on his Palm Tungsten T. And these aren't conversions—they're the very same games he was playing 24 years ago. XCADE is an arcade emulator for Palm OS 5 that lets you play 17 classic

arcade games from the late 70s and early 80s. These aren't rewritten tributes to the original—XCADE uses the actual program code from the original arcade machines. All that's missing is the coin slot.

Other than lack of sound (which CodeJedi plans to add eventually), gameplay is identical to the original games. The games—which include classics like Galaxian, Pac Man, Donkey Kong, and Space Invaders—run at full speed, and are very responsive. XCADE works on the Sony NX70V, but the Tungsten T's controls are better suited.

There's just one complication: If you don't have a wall of original arcade machines in your basement, or at least the circuit boards from them, there's no legal way to get the ROMs to run on XCADE. The program can use ROMs from the desktop MAME emulator, but those have been almost eradicated from the Web due to copyright restrictions, so much of the initial challenge is tracking down the games. MAME collectors will be all set, though, and they'll find this program well worth the meager cost.

—Denny Atkin

CodeJedi
www.codejedi.com
\$7.50

B+



TakTik

An intriguing mixture of chess and Stratego, Kickoo's TakTik is an acquired taste. On a chessboard-like play field, you must capture your opponent's princess while protecting your own. Your "men" consist of soldiers, thieves, magicians, and other characters of varying strength and capability, all rendered with cutesy cartoon graphics. The game supports grayscale, color, high-resolution, and HiRes+ screens, as well as two-player action via IR and Bluetooth. You'll need the built-in tutorial to figure out the gameplay, though, which is decidedly complex at first and somewhat unfulfilling in the long run. Why? We honestly can't put our finger on it, so we recommend you download the trial version and try it for yourself. TakTik looks terrific and seems like a strategy lover's dream. But it failed to engage us.

—Rick Broida



TakTik looks great, but its turn-based tactical gameplay left us cold.

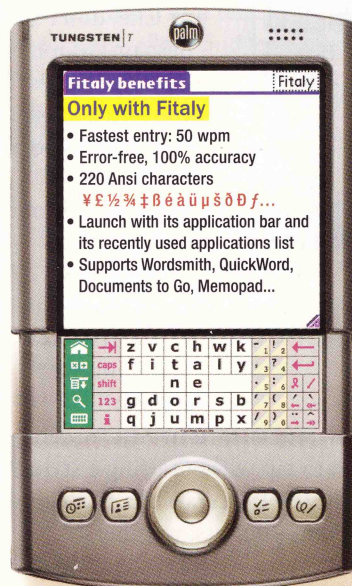
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\$12.50

B-



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— Gary Krakow MSNBC

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SeidioPak

Yes, it's another dual Compact Flash sleeve for the iPAQ. The SeidioPak's difference is its use of a standard Nokia 8290 cell phone rechargeable battery pack. Seidio sells these for \$24.95, and compatible batteries can be found online at places like eBay for under \$10—a fraction of the cost of HP's batteries for its iPAQ sleeves. Perfect for stocking up on batteries for a long flight. A USB sync/charging cable is included as well.

The dual CF slots are stacked on top of each other; one's suitable for memory, while the other can also use I/O devices such as WiFi or digital camera cards. The sleeve is a sleek silver color. It's a bit thick, and we wish it had a cover like HP's sleeves.

—Denny Atkin



SeidioPak uses standard cell-phone batteries; alas, the iPAQ won't report on the Pak's remaining charge.

Seidio
www.seidioonline.com
\$109.00

B+



Dell Foldable Keyboard for Axim

Dell's Foldable Keyboard for the Axim turns this bargain Pocket PC into a laptop alternative for writers on the go. Based on the same design as the foldable keyboards from HP and Belkin, this keyboard is small enough to fit in a jacket pocket, yet it opens up to a size just over an inch smaller than a notebook keyboard.

The feel is good enough to touch-type at high speeds, but tactile feedback isn't as good as Think Outside's Stowaway. The optional sound feedback feature makes your high-tech Pocket PC sound like a classic typewriter. Fn key combinations give instant access to apps such as Pocket Word and Internet Explorer. Ten programmable combos are available as well.

Perfect for the tight confines of an airliner tray table, this is an excellent companion for the Axim.

—Denny Atkin



Plug in a keyboard and put away that stylus.

Dell
www.dell.com
\$99

A-



Award-Winning must-have software for your Palm® OS!

Agendus

(Previously called Action Names Datebook)

Agendus for Palm® OS enhances, but does not replace, your Palm's built-in applications including the address book, calendar, and to do list.

Agendus for Windows synchronizes with Agendus Palm

Agendus for Palm OS adds over 200 productivity improving enhancements. There are eleven different highly customizable and filterable agenda views. Contact linking and the automatic contact history make you more effective dealing with people. One-tap scheduling and follow-up scheduling save time and effort. Now, customize and group the names in your address book. Improved and customizable color icons and text options allow for better visualization of commitments. There's a separate category for pending phone calls.

NEW! Agendus for Windows. Maps one-to-one with Agendus Palm yet uses the Palm Desktop or Outlook database. **SRP STARTING AT: \$24.95**

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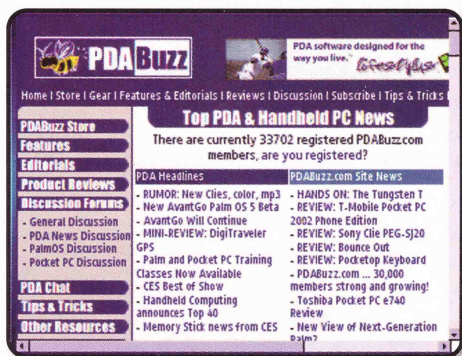
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reviews

ThunderHawk

Bitstream's ThunderHawk makes the best of a bad situation—namely, browsing the Web on a Pocket PC. The screen just isn't suited for it, in part due to its low resolution (320x240 pixels), in part due to its orientation (tall instead of wide). Neither Microsoft nor Access Systems (makers of NetFront, a competing browser) thought to do the obvious: rotate the screen 90 degrees to better approximate desktop browsing.



Seeing is believing: ThunderHawk makes Pocket PC Web browsing downright palatable.

ThunderHawk not only does that (and to great effect), it also utilizes custom fonts (now do you remember where you've heard of Bitstream?) that can squeeze a lot more information

on the screen while maintaining legibility. The result is not only the best Pocket PC Web browser money can buy, but also a genuinely pleasant Pocket PC browsing experience.

ThunderHawk banishes all toolbars, menus, and other browser flotsam to give you a full-screen view of Web pages. You use the D-pad to scroll, two hardware buttons to navigate forward and backward, and two more buttons to access an onscreen keyboard/toolbar. The latter allows you to tap-type URLs, change views, and access a refreshingly intuitive Favorites screen. Perhaps most amazing of all, ThunderHawk can approximate resolutions of 640x480 and 800x600. Certainly some Web elements (button bars, white text on dark back-grounds, etc.) become hard to read at those resolutions, but for the most part ThunderHawk renders amazingly legible pages.

We'd pay almost anything for a browser like this, but Bitstream's curious pricing scheme—\$49.95 per year—is likely to discourage all but the most affluent users. A more realistic one-time charge of, say, \$29.95 would easily make this a Top Pick product.

—Rick Broida

Bitstream
www.bitstream.com
\$49.95 per year

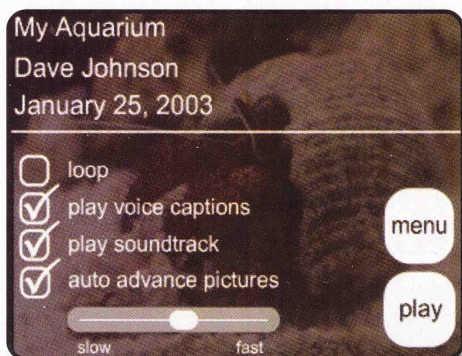
B+



PhotonShow

PDA photo viewers like PicturePerfect and Resco Picture Viewer are fine for reviewing digital images from your camera's memory card, but what about when you want a bit more panache? You might try something like iZotope's PhotonShow, a clever slideshow application for both Windows and the Pocket PC.

The watchword with PhotonShow is portability. You begin on the desk-top, where a Windows application lets you create



You can orient your PhotonShow slideshows vertically or horizontally, depending upon the sorts of pictures you plan to display.

some very clever-looking slideshows using your own digital photo library, an MP3 or WAV sound-track, and iZotope's collection of themes. You can caption your pictures and add voice

notes to your images. When you're done, you share your slideshows by burning them onto CD, uploading them to the Web, or copying them to the Pocket PC.

PhotonShow comes with nearly 100 very cool themes. Not all of them are static; some are interactive, turning your pictures in sliding block puzzles or "Concentration"-style memory games, while others play your slideshows inside cinematic filmstrips or as the art decorating postcards. For the Pocket PC, however, you get just a few themes that vary mainly by transition, like fades, pushes, and flying images. That's too bad, but understandable; Pocket PCs don't have a lot of screen estate or horsepower. Our only real complaint? Transitions on the Pocket PC are really rough. A fade, for instance, is composed of about five or six lurching "steps" that bridge one image to the next.

PhotonShow is a good idea, but it's really best for folks who also want to take advantage of the other sharing methods, like Web and CD.

—Dave Johnson

iZotope
www.izotope.com
\$49

B



EverQuest for Pocket PC

If you're not an EverQuest player, you've probably at least heard of the game through news stories. With nicknames like "EverCrack" and "NeverRest," this role-playing game is known as one of the most addictive online multiplayer games around.



Unlike the PC version of the game, EverQuest for the Pocket PC is a solo endeavor.

But while the Pocket PC version of EverQuest shares a name and a setting with the online game, it sends you on your quests solo, and it's not likely to steal more than 30 or 40 hours of your life. (Although Sony has two sequels in the works...)

You start the game by picking a character class—Druid, Warrior, Wizard, or Magician—and a difficulty level. From there, it's typical RPG fare: Explore the city, talk to

characters to find out what evil is befalling the world, and fight with rodents of unusual size and various other monsters in an effort to build your character's abilities. The game is fairly easy to play—death brings instant resurrection in a safe area, sans some of your gold. Combat, alas, is almost too easy: just tap on the opponent you want to fight, pausing occasionally to drink a potion, change spells, or run like crazy.

What makes EverQuest PPC most impressive is its production values. The orchestral music sounds great, and the graphics are sharp and detailed, falling somewhere between the latter 2D Ultima games and Diablo.

While EverQuest PPC is an impressive RPG, we have to admit that we were somewhat disappointed that it wasn't really EverQuest (the full massively multiplayer online game) for the Pocket PC. Although that may be a good thing in the end—we can only imagine the catastrophic phone bills, lost jobs, and pedestrian accidents that would result from EverQuest addicts having wireless access to their characters on a handheld.

—Denny Atkin

Sony Online Entertainment
eqpocket.station.sony.com
\$19.99

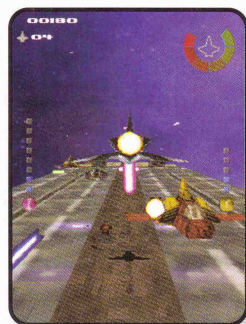
B+



Interstellar Flames

With so many Pocket PC games priced \$20 and higher, it's remarkable to find one for just \$6.99. It's even more remarkable when it turns out to be one of the best Pocket PC games ever. Interstellar Flames, an arcade-style space shooter, scores with its dazzling graphics, impressive sound effects, and perfectly balanced, endlessly entertaining gameplay. You're at the controls of a small fighter out to destroy a dreadnaught. That means taking out turrets and shield generators on its surface while trying to blast enemy ships out of the sky. Doing so occasionally reveals weapon and shield power-ups. The d-pad controls can be awkward at first, and the game desperately needs a volume control. Even so, it's a must for arcade fans—and bargain hunters.

—Rick Broida



Interstellar Flames is arcade action at its finest—and cheapest.

Xen Games
www.xengames.com
\$6.99

A

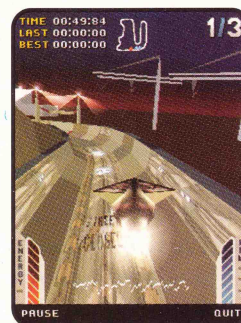


Geopod

Geopod is an excellent way to show off what the Pocket PC is capable of graphically. This Wipeout XL-like game puts you in the cockpit (or rather, behind the cockpit) of a high-speed hovercraft racing on a futuristic track. Physics are simple and controls are limited to left, right, accelerate, and brake. The action is heated on the three included race tracks, and both single-race and championship modes are available.

With just three tracks, you're apt to lose interest quickly once you've finished appreciating the speedy frame rates and texture-mapped 3D graphics. The game's saving grace is its support for two-player head-to-head racing over WiFi or Bluetooth. Get a buddy to buy the game and you'll find competition can make an average game great.

—Denny Atkin



A decent single-player game, GeoPod excels in head-to-head wireless play.

Fathammer
www.fathammer.com
\$20

B



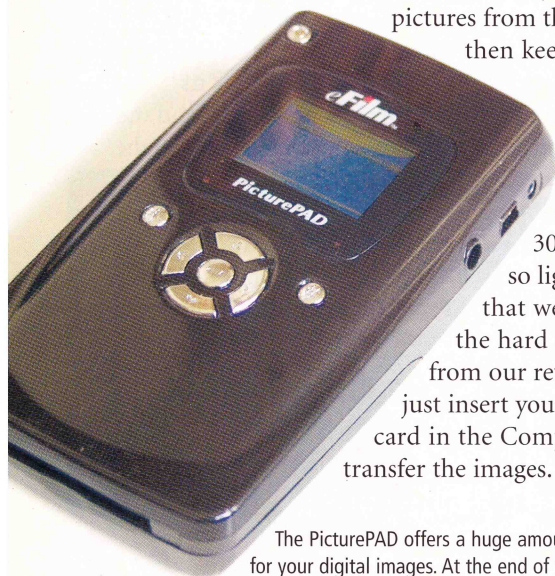
reviews

eFilm PicturePAD

Your digital camera's memory card is filled up, but you're in the middle of your summer vacation, miles from a computer. What to do? With an eFilm PicturePAD, you just offload pictures from the memory card, then keep on shooting.

The PicturePAD is about the size of a hard disk-based MP3 player, and comes in 20GB and 30GB capacities. It's so light (just 10 ounces) that we initially thought the hard drive was missing from our review unit. To use it, just insert your camera's memory card in the CompactFlash slot and transfer the images. You can even erase

The PicturePAD offers a huge amount of portable storage for your digital images. At the end of the day, review the pictures on your TV.



the card in the PicturePAD before you pop it back in your camera, conserving camera batteries. Delkin sells \$59 adapters for SmartMedia, SD, and Memory Stick media.

The device sports a 1.75-inch color LCD that lets you view your images right on the device, and a video-out connection lets you run slideshows on a television. A USB 1.1 port transfers your images to a PC; if you have Windows XP, you don't even need to load any device drivers. A FireWire adapter is available for quicker transfers.

While the LCD display is too small for critical analysis of your pictures, the PicturePAD lets you zoom in and pan around your photos. You can also delete and rename images. Delkin includes a soft travel case and a credit card-size remote for controlling television slideshows.

With a one-hour battery life between charges and an integrated CompactFlash slot, the PicturePAD is a superb pack-along accessory for serious shutterbugs.

Unfortunately, it's priced for the seriously wealthy. For \$550, the memory card adapters should be included.

—Dave Johnson

Delkin Devices

www.delkin.com

\$549 (20GB) or

\$649 (30GB)

B+

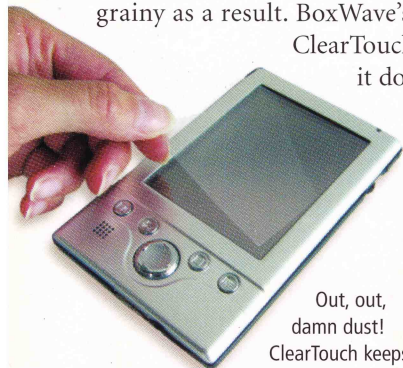
ClearTouch

A scratched screen is the bane of every handheld user. BoxWave's ClearTouch, available for most models, keeps your screen pristine. Unlike some screen protectors, ClearTouch is neither difficult to apply nor ruined if you make a mistake. In fact, the sheet is actually meant to be removed, rinsed in water, and reused. BoxWave says it should last the life of the handheld.

Though it isn't textured like some screen protectors, ClearTouch does afford a slightly less-slippery writing surface than a handheld's bare screen. We particularly like the way it cuts glare to almost zero—but your screen does look a bit grainy as a result. BoxWave's only specious claim is that

ClearTouch stays free of fingerprints, which it doesn't. Even so, this is inexpensive, essential protection.

—Rick Broida



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your screen pristine.

BoxWave

www.boxwave.com

\$12.95

A-



Cruzer

You've seen those USB "keys" that are all the rage—small plastic memory devices that plug into a USB port and let you easily move 64MB or more of data from computer to computer. PDA owners, though, might find SanDisk's Cruzer a better value. The difference here is that the memory is stored on a standard SD card. Ostensibly this lets you "upgrade" the Cruzer, but it also lets the Cruzer function as a USB drive for quickly copying files to your PDA's SD or MMC card. Just plug the Cruzer into your PC and it appears as another disk drive—no drivers necessary on Windows Me or newer, or Mac OS 9.1/X. It's a useful companion for PC and PDA alike.

—Cary Naismith



The Cruzer functions as both a file storage device and an SD/MMC card reader.

SanDisk

www.sandisk.com

\$79.99 (128MB model)

A-



TransPod

We very much wanted the TransPod to work well. The idea's great: A compact FM transmitter for your iPod MP3 player that plugs into your cigarette lighter to keep the unit charged. Unfortunately, the device needs redesigning. The biggest problem is the tuning dial that lets you set an unused frequency to use to transmit to your car stereo—it's very loose, and is easily knocked off-station. Also, in many cars, the stick shift will block you from plugging directly into the cigarette lighter. A cable's included for relocating the holder, but you then have to drill mounts in your dash. The TransPod does a good job of clearly transmitting your iPod tunes to a car stereo, but for \$99 we expect a device with fewer frustrations.

—Denny Atkin



TransPod is a combination charger/FM transmitter for the iPod.

Natalog
www.everythingipod.com
\$99.99

C+

MiniSync

Time for a riddle: what fits in your pocket, extends and retracts, and charges and synchronizes your handheld PC? It's BoxWave's MiniSync, an indispensable travel companion for anyone who likes to travel light. At one end of the little gizmo, a USB connector plugs into any notebook or desktop PC. At the other, a plug connects to one of nearly 30 different handhelds (including Dell's Axim, Palm's Tungsten, Sony's NX, and various Pocket PC phones). In the middle, a spring-loaded spindle lets you extend two thin cords up to 35 inches, then retract them again with a simple tug. Just one catch: you have to remember to pull both ends simultaneously, or the cords will get tangled around the spindle. With handheld battery life being what it is, don't leave home without MiniSync.

—Rick Broida



Give it a pull, and MiniSync extends to nearly three feet. Then it charges and syncs your handheld.

BoxWave
www.boxwave.com
\$24.95

A-

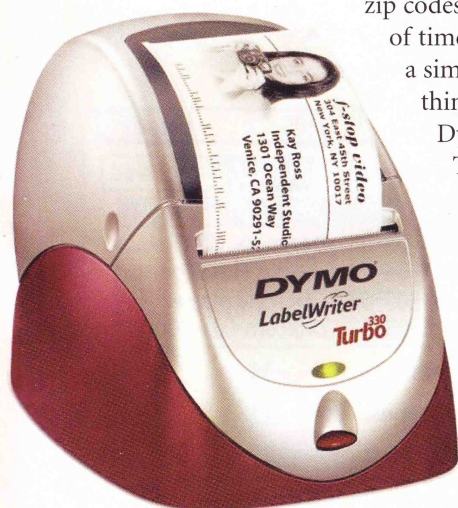


LabelWriter 330 Turbo

Generating address labels can be labor-intensive. Load label sheets into the printer; copy, paste, and format addresses from your contact list; and look up lost zip codes—this all adds up to a lot of time for what should be

a simple task. You can speed things considerably with Dymo's LabelWriter 330 Turbo, which not only automates the printing process, but also integrates with your existing contact database.

The handheld connection comes via the Dymo Label software, which offers two-click printing from either Palm Desktop 4.x or Microsoft Outlook.



Dymo's software makes pulling address label info from your Palm or Pocket PC address book a two-click affair.

(It also integrates with Word, Act!, and GoldMine.) Select addresses to print, click the Dymo button on the toolbar, click Print, and two seconds later a label appears. Options include address adjustments, customizable return address, and adding a company logo or other graphic to the label. You can also add PostNet bar codes to your label, which can speed envelope and package routing.

Dymo's Address Fixer feature automatically checks the format of an address to insure that it meets postal specifications, and looks up the proper ZIP+4 code for the address via the Internet.

We tested the LabelWriter 330 Turbo, which prints labels up to 2.3" wide at a rate of 32 labels per minute. It connects via either USB or serial ports—the latter handy if you're attaching it to a Windows 95 PC without proper USB support. Print quality on thermal labels is superb, with dark, crisp lettering and graphics. A wide variety of media is available, from address, package, and folder labels to CD and videotape labels.

The LabelWriter is a useful—and unusual—timesaving companion device for your handheld.

—Denny Atkin

TurboDymo
www.dymo.com
\$209.99

A



Have you experienced a Palm pickle? A Clié calamity? A Treo tribulation? PDA Problem Solvers are on the job. Send your questions to editor@hhcmag.com and we'll do our best to answer them in these pages.

Problem: When I set up the Palm Mail application, I didn't realize it was going to download every single message from my Inbox to my handheld. Now I've got a gazillion messages in there. How can I delete them all at once instead of one at a time?

Solution: We like Palm Mail, but the lack of a mass-mail deletion option drives us crazy. One less-than-stellar solution is to delete all the mail from your desktop Inbox, then HotSync. Another is to use a third-party file manager (we recommend Filez, a freebie available from PalmGear.com) to delete the MailDB file from your handheld. If you want to avoid this problem in the future (that is, keep your e-mail from copying to your handheld), right-click the HotSync Manager icon in your Windows System Tray, then click Custom. Select the Mail conduit and set it to Do Nothing.

Problem: Under certain lighting conditions, the glare on my screen is atrocious. How can I reduce it?

Solution: With a plastic screen-protection sheet. We're partial to the BoxWave ClearTouch (see review in this issue) and the Fellowes WriteRight (www.fellowes.com). Both offer excellent screen protection and a dramatic reduction in glare. Be warned, however: you lose a bit of screen contrast in the equation.

Problem: My Sony Clié didn't come with the Memory Stick Backup utility bundled with other models. How can I make backups?

Solution: For some reason, Sony neglected to include this useful utility with a few models. Fortunately, there are third-party alternatives. Our favorite is PiTech's PiBackup II (www.pitech.com), which offers a variety of smart features—including automated, scheduled backups.

Problem: I have a Palm m500-series handheld and have heard about/had problems with electrostatic discharge (ESD). What should I do?

Solution: This long-documented problem affects the handheld's USB chip, rendering it unable to HotSync. Palm's original solution was to replace the cradles, but that doesn't help handhelds already zapped by ESD. In that scenario,



HiRes+ lets you pack a lot of information on a single screen in applications such as DateBk5.

you have three options: send the unit back to Palm for repair (they'll probably provide you with a refurbished replacement), fully drain the battery so the handheld resets itself, or ask Palm for a HotSync SD Reset Card. This free card, which plugs into the handheld's expansion slot, first backs up all your data, then automates the process of draining the battery (which takes at least

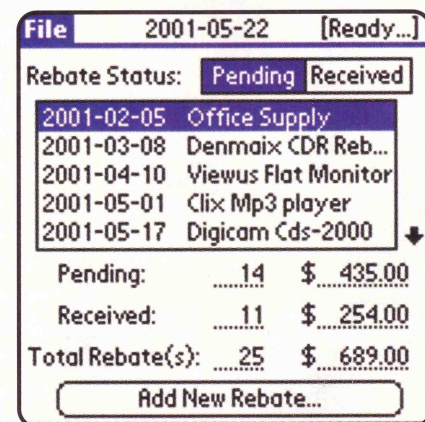
eight hours). It's a less-than-perfect solution, because ESD can certainly strike again, but at least you get a free 16MB backup card out of the deal.

Problem: What is HiRes+?

Solution: Now, now, play fair, that's not really a problem, it's a question. But since you asked, here's the answer: HiRes+ is the unofficial name for handheld screens that have a 320x480 resolution. That includes Sony Clié NR, NX, and NZ models, as well as Garmin's new iQue 3600. Why HiRes+? Well, original Palm OS handhelds had 160x160-pixel screens. Doubling those numbers (to 320x320, as on the Palm Tungsten T) would qualify as "high resolution," or HiRes. But when Sony stepped in with an even higher resolution, the term HiRes+ was born.

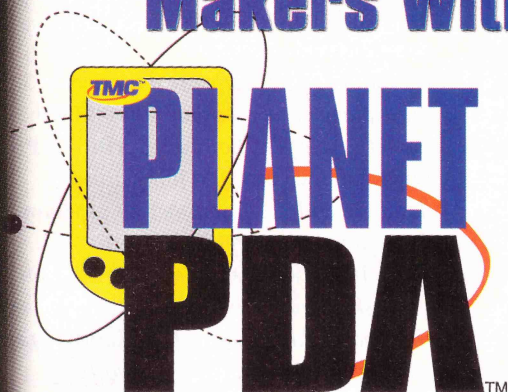
Problem: A lot of the products I buy come with rebates. How can I use my handheld PC to track the ones I've sent in, received, etc?

Solution: Try Rebate Tracker (www.xiy.net). It's designed to let you quickly and easily record rebate details, see how many days have passed since mailing, calculate money expected versus received, and so on. If you really do deal with a lot of rebates, this is probably \$8.99 very well spent.



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Is your Pocket PC acting up? Is your ActiveSync inactive? Look no further than PDA Problem Solvers! Send your questions to editor@hhcmag.com and we'll do our best to answer them in these pages.

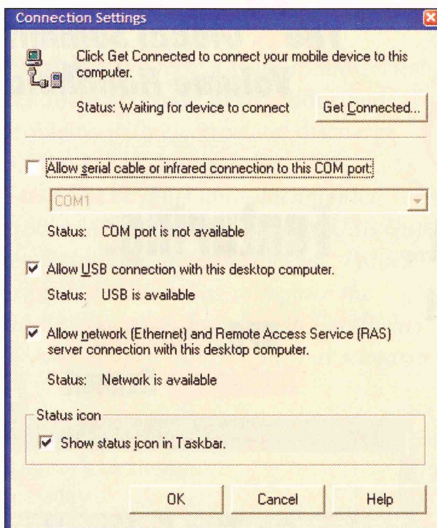
Problem: When I use my WiFi card, I've selected "Internet" for the "my network card connects to" setting in order to browse the web or access my POP3 email. But then I can't access my networked PC.

Solution: Go the Settings folder, tap the "Connection" tab, and then tap the "Connections" icon. Now set "My network card connects to:" to read "Work," and insure the box above it reads "Work Settings." Now, along with browsing the Internet, you can use File Explorer on your Pocket PC to browse shared folders by choosing the "Open" menu item at the bottom of the screen. In the window that pops up, type your PC's network name. For instance, if your computer's called "Narnia," you can access a shared documents folder by typing "\\NARNIA\Shared Documents".

Problem: I just got a new WiFi card for my Pocket PC, but I can't get it to ActiveSync wirelessly.

Solution: First, follow the instructions in the tip above to insure that your Pocket PC is configured to connect to "Work." Then, open ActiveSync on your PC, choose "Connection Settings" from the "File" menu, and check the box next to "Allow network (Ethernet) and Remote Access Service (RAS) server connection with this desktop computer." Then load ActiveSync on your Pocket PC, choose "Options" from the "Tools" menu, and be sure that "Include PC when synchronizing remotely and connect to:" is checked and that your PC's network name is listed below it. Note that you must first sync via cradle before WiFi ActiveSync will work properly.

Problem: Every time I try to ActiveSync, my PC considers my Pocket PC as a "Guest." I do have a partnership set up on the PC, and it used to sync fine. Help!



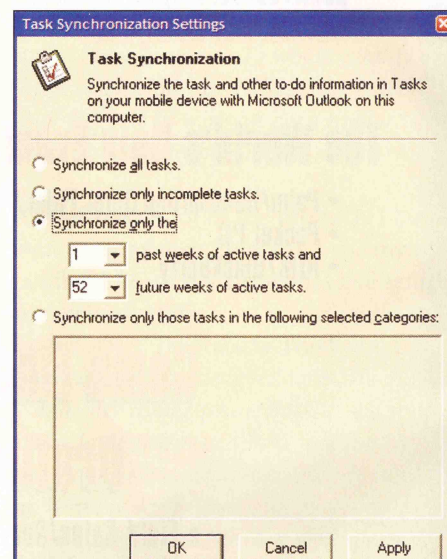
To Sync via WiFi, you'll need to insure that "Allow network connections" is selected in ActiveSync.

Solution: We've had this ActiveSync bug pop up a number of times. Microsoft's recommendation is to do a soft reset on your Pocket PC. Various online users have suggested typing the command "regsvr32 msxml3.dll" in the Start/Run window on your desktop PC. Neither solution worked for us. Finally, we deleted the partnership with our Pocket PC on the desktop version of ActiveSync, and on the next sync we were able to re-establish the partnership and sync properly. We first saw this sporadic problem reported back in 1999, with ActiveSync 3.0, and as of release 3.6 Microsoft still hasn't fixed it.

Problem: I notice that the PC version of ActiveSync offers an option to Sync with Pocket Access on my Pocket PC 2002 handheld. But Pocket Access isn't on my PDA, and I can't find it on the CD that came with it or on Microsoft's site either. Where can I get this program?

Solution: Pocket Access is included on some "Handheld PCs" running Windows CE, which is why it's included as an

ActiveSync option. However, Microsoft doesn't include Pocket Access as part of Pocket PC 2002. There are a number of third-party databases that do work with Pocket Access files, however. **SprintDB Pro** (www.kaione.com) is a full-featured database with forms, numerous programming functions, graphics support, and more. It easily shares data with Access on the desktop via ActiveSync. Note that many third party databases such as **HandDBase** (www.ddhsoftware.com), a two-time Handheld Computing "Best Product" award winner, can also share data with Access via their own synch conduits.



If your Outlook schedule is packed full of entries, you can choose to sync a limited range of appointments.

Problem: I have tons of data in my outlook calendar. Is there an way to limit the number of weeks of schedule data that are transferred when I ActiveSync?

Solution: Sure. Open ActiveSync on your PC, click the "Options" icon, and choose "Tasks" from the list of information types. Now click the Settings button. Here, you can choose to only synchronize the past x weeks of past and future schedule data.

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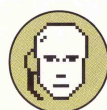
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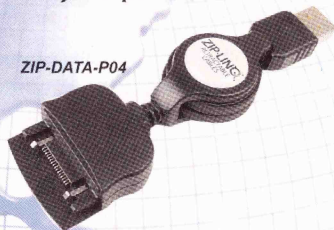
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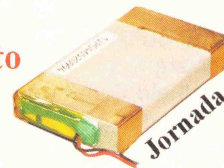
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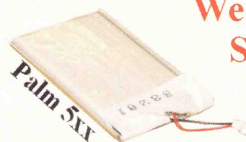
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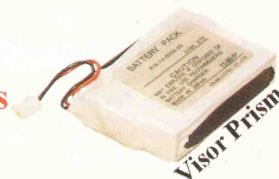
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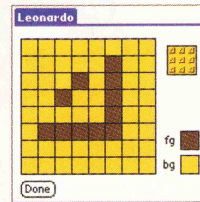
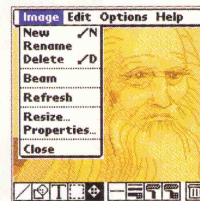
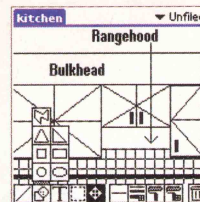
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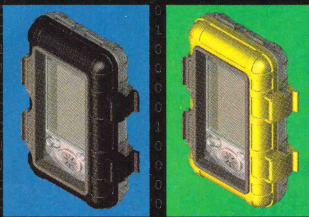
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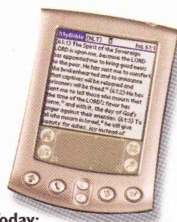
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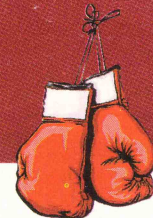
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The Upgrade Game

The upgrade path for PDAs is narrow, rocky, and missing some road signs

Dave Conventional wisdom says you need to upgrade your desktop computer every three years or so, when CPU speeds have doubled and it'll no longer play the really cool games. But PDAs don't really obey those same laws, do they? How often do you replace your PDA? I was perfectly happy with my Visor Prism for years and years, but now Sony seems intent on getting me to buy a new PDA every few months. And I'm sad to say they're succeeding. I've gone from the Prism to an NR70V to an NX70V in just six months, and I'm probably not done.

Rick At first I was amused by Sony's hyper-prolific production (10 new models in 2002 alone), but now I'm getting a little annoyed. Maybe it's because I just dropped \$600 on an NX70V, only to discover the even-cooler NZ90 a month later. Heck, the company's already got four new models in the hopper for 2003, and it's not even February yet. Anyway, the question of when to upgrade is a good one, but you're already wrong (such speed!). The same rules do apply to handhelds as to desktop computers: You upgrade when the hardware (and, to a lesser extent, software) no longer suits your needs.

Dave Well, that's what I said—as long as you define "your needs" by what games are popular. And you can apply the same rule to PDAs. On the Palm OS side of things, at least, OS5 and ARM processors are allowing developers to make some very exciting apps that won't run on anything but the newest PDAs. That's driving the urge to upgrade. But realistically, for most people, PDAs don't

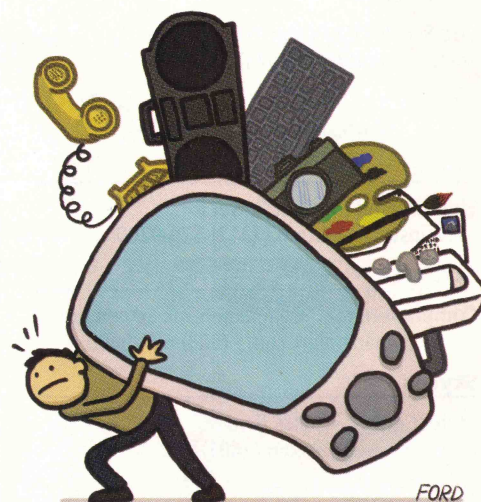
need to be replaced nearly as often. I can manage my calendar and show pictures of my cat about as well on my old 1999 Prism as I can now on an NX70V. What has all the extra money really bought?

Rick Uh, let's see: an MP3 player, a digital camera, a voice recorder, a vastly superior screen, two expansion slots—shall I go on? I'm concerned that you can't discern any differences between a Visor Prism and a Sony NX70V. You haven't been taking the cat's medicine again, have you? I clung to my Palm Vx for a long time before making a change because there weren't enough compelling reasons to do so. It took Sony's N760C, with its high-res color screen, MP3 player, and jog dial, to make me switch. If I were a Pocket PC user, you can bet I'd be eyeing the HP iPAQ 1910. That baby is sweet; so much thinner and lighter than the usual megabulk Pocket PC models.

Dave Ugh. I don't believe this—now you've magically transformed into Convergence Man? What's it like becoming everything you've railed against for the last two or three years? Don't you see that all those gimmicks are secondary to the key role of being a PDA? Add an MP3 player, digital camera, voice recorder, toothbrush, death ray, and what do you have? A PDA that does a dozen things, but few—if any—of them well. Tell me, ConMan, how many songs can you fit on your Clie? Oh, only a dozen or so? That's too bad. Can you print and frame the pictures you take with your PDA camera? Didn't think so. And when you do pack it all into one little gadget, it

ends up so big that it needs its own set of wheels—check out the new Clie NZ90 if you don't believe me.

Rick I was going to say how shocking it is that your memory is so poor, until I remembered your advanced age. I quote Dave Johnson: "I want it to be a cell phone, GPS receiver, MP3 player, automobile key fob, TV remote, and



voice-to-text dictation machine. I want convergence, and I want it now. [‘Head2Head’, Nov/Dec 2000]” Now that you have all (okay, most) of that, you're griping about limited storage space and resolution? Talk about seeing the glass as half empty. My only regret is that the readers can't actually hear you sputtering. Poor, sad, confused Dave—you just won't be happy until your brain is actually installed inside a PDA, will you? I have a secondhand PalmPilot Personal here with more than enough memory and processing power to accommodate it. ♦

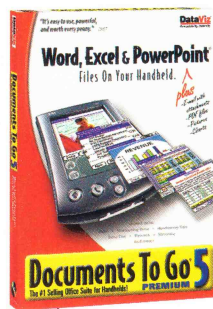
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